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Educational News and Editorial Comment

HEALTH PROGRAMS

The following are statements of the health programs carried out in Williamson, West Virginia, and New York City:

WILLIAMSON, WEST VIRGINIA

As a part of the training in physical education that has been adopted by the school system, and in connection with hygiene as it is taught in the school each pupil enrolled in the Williamson schools must be weighed every month. Charts for each room have been provided, and on these charts each pupil is registered; the age, weight each month, and the standard weight are entered and compared from time to time. Losses and gains in weight are carefully watched, and efforts are made to correct any unnecessary deviations from the standard.

A yearly medical examination is made of the pupils, and the record kept in the school files. The card is arranged so that the record is permanent, and each succeeding year's report is added to the individual card made for each pupil. Serious defects brought out by the examinations are reported to the child's parents, and medical aid is provided.

In keeping with the health program, due each child of school age during school attendance, Williamson provides a nurse to watch the health of the pupils. During certain hours each day, the nurse examines children who may be sent to her office by their teacher, cares for their minor injuries or illnesses, and if necessary takes them home and sees that proper medical attention is supplied.

The greater part of each day the nurse devotes to making calls on children who are out of school and are reported on the sick list. She investigates their condition, gives services and advice, gets a view of the general health of the

children, and is able to warn the teachers of serious diseases or epidemics that may be checked by proper attention and careful watching.

From time to time during the year various physicians, doctors, dentists, and surgeons are asked to address the grade and high-school pupils on the care of the body, eyes, teeth, and other organs. This is the extent of a health program carried out now, but within a few years' time health and physical education will be as compulsory and as important as other academic subjects and will receive as much attention in the schools.

NEW YORK CITY

In an effort to determine what it would cost New York to keep its 800,000 school children in good physical trim, the Department of Health has opened an experimental health station in Public School 43, Manhattan, according to an announcement made today by the New York County Chapter of the American Red Cross.

The 3,000 children who attend that school will be given the most efficient health care possible under the direction of Dr. S. Josephine Baker, head of the Bureau of Child Hygiene. In remedying physical defects the bureau will be assisted by the Red Cross chapter and the departments of physical education, household economics, and nursing of Teachers College.

More than a thousand of these children in the school have been found to be undernourished. A doctor and nurse have been installed in the school by the Department of Health to examine each child and consult with its parents regarding physical defects, such as diseased tonsils and adenoids and poor vision and hearing. A dentist provided by the Red Cross is treating the teeth of the children. Teachers College has turned over seventy of its public health and nursing students to assist in home visiting and field work.

The experiment is expected to show just how much health supervision must be given and its minimum cost to keep the children in good health.

A SUGGESTED EDUCATIONAL PROGRAM

A series of conferences has been held during the last two months in which a number of laymen and educators have participated in the effort to formulate the major lines of activity along which those who are interested in American schools should co-operate in order to improve educational conditions. It is not unlikely that these conferences may issue in some definitely organized effort to carry out the program suggested. In the meantime, the program itself is impressive because of its compact statement of current educational needs. The full statement is as follows:

Public education is not a professional matter only. Education must be linked with life, and to this end the forces of society must unite with the professional forces of education for a joint accomplishment. For this purpose,

in the judgment of leaders in public education and laymen, there must be established:

1. A central agency or clearing house, preferably in connection with some existing lay organization, for the collection of facts and the determination of procedure. Associated with this agency a large co-operating committee of leading educators already pledged to such support, and agreeing upon the following improvements, among others, in public education as immediately necessary.

2. An extension of teacher-training facilities in normal schools, in continuation and extension instruction, and in training "on the job."

3. New teacher-salary schedules commensurate with those paid in other comparable occupations. Ratings and promotions dependent upon period of service and personal and professional qualifications.

4. A teacher tenure of office based upon merit, replacing the prevalent practice in most cities of advancement solely upon the basis of length of service.

5. A reshaping of elementary education, eliminating at least one year of the present content which is repetitional and waste, and replacing this with live courses in civics and economics which now are taught almost nowhere in the elementary or high schools, with the result that 80 per cent of all American children leave school forever with no formal education whatsoever in these subjects or in health or the use of leisure time.

6. A longer school day and year, including in the longer time civics, economics, vocational training, health, and recreation, and thereby lessening rather than increasing the strain upon the pupils.

7. Adult education in our schools, in factories, and elsewhere for everyone of whatever age who desires to enlarge his understanding as a citizen or improve his economic condition.

8. Public support of the best educational leadership, intelligent and insistent in opposition to such inferior and political leadership as now unfortunately predominates in many quarters.

9. Taxation safeguarded in amount and in use to the end that a dollar's worth of education is received for every dollar spent.

TWO CITIES

The school organizations in the great cities of the United States are passing through a period of desperate resistance against political control. The situation in New York City is vividly described in an editorial published in the *New York Evening Post.*

STATE POWER AND CITY SCHOOLS

The public school system of New York City is in a desperately bad condition. For this situation the present city administration and the school

board appointed under it must in large part be held responsible. But the very seriousness of the situation makes it necessary to scrutinize with the greatest care measures put forth to relieve it.

There are two proposals now before the Legislature affecting directly the organization and control of education in New York City. One is embodied in the Mullan-Wright bill, and affects all the cities of the state. It gives virtually complete financial independence to the school board of New York City—only slightly less complete than that given to other cities in the state. This bill should pass. It will in no sense cure all the evils of school financing and school administration in this and other cities but it will eliminate the difficulties due to divided control. It will set up one authority, instead of two or more, in school affairs, and it will make it possible for the community to place the responsibility for success or failure in public education squarely where it belongs.

The other proposal is embodied in Senator Robinson's measure to abolish the present New York City school board of seven members and substitute for it a larger board to be chosen by a special commission composed of the mayor and the four resident members of the State Board of Regents. This bill should not pass. Not even the emergency situation in New York City can justify a bill that is so fundamentally wrong in principle. It strikes at the basic right of the people of a community to have a large share in the conduct of their schools, a right by no means impaired by the recognition of education as a state function; it would have New York revert to the large board, a type of school control from which the city has happily freed itself; and it epitomizes a contempt for public opinion that makes the remedy worse than the disease. The way to a better school board and better schools is through more democracy, not less.

The last sentence of the editorial calls attention to a fact which school people have no right to overlook. There is a sense in which schools should be kept out of politics. The surest way to reach this desirable end is for the community to interest itself in schools enough to clean up the board and, if necessary, the whole municipality when matters go wrong. The experience of St. Louis shows that this can be done when the people of a city are sufficiently informed and intelligently guided.

The schools of St. Louis were provided during Superintendent Soldan's administration with a charter which is not surpassed in professional spirit and effectiveness by any in the nation. The boards of education elected under this charter were for many years of the highest quality. They were nominated by the conventions of the two leading political parties, and under a gentle-

man's agreement were kept out of the squabbles which surround other political nominations. The parties took pride in presenting to the city the highest grade of nominees. In 1910, by a general state law, the mode of nominating all city officials was changed to the primary method. This proved disastrous so far as education was concerned. The quality of the board deteriorated rapidly. The latter years of Superintendent Blewett's administration were filled with annoyances from the self-seeking and often corrupt politicians who had secured places on the board.

When Dr. Withers became superintendent, he immediately faced this political situation. He saw that there could be no compromise with machine politicians and therefore stood out firmly and persistently. He ignored the demands of the politicians on the Board of Education for personal favors at the expense of the school system. The result was that he set in opposition to his policies the spoilsmen on the board who were at no time in the majority, but were sufficiently numerous and influential seriously to hamper his work. At the end of his four-year term he told the Board of Education and the citizens of St. Louis that he could be of no service under a board including so large a number of corrupt politicians. After his announced refusal to stand for re-election he unhesitatingly and vigorously gave his time and energy to the work of explaining the school situation to the public in an impersonal and disinterested way. The result of his resignation and the outspoken condemnation of the acts of the spoils element on the board of education was the thorough awakening of the citizens and the unexampled victory in the April election. The women of St. Louis played the major part in the house-cleaning.

The story is told in an editorial in the *St. Louis Star*, one of the several papers that helped in the fight. The editorial in part is as follows:

FUTURE OF OUR SCHOOLS

The non-partisan Board of Education victory, which carries with it an assurance that the school funds will be economically and judiciously administered, removes whatever objection there may have been to voting "yes" on the proposed tax increase tomorrow. The 85-cent rate should be carried overwhelmingly.

Prior to Tuesday there might have been some reasonable hesitancy about entrusting further public moneys to a body weakened by political cabals. With the cleansing accomplished, however, there is no reason why an excellent non-partisan board should not be provided with all the revenues necessary to keep our school system up to the highest standard.

The women of St. Louis, working through their voters' league, deserve the thanks of the city for the excellent job of house-cleaning they did on Tuesday. It is only to be regretted that in concentrating on school board affairs they did not find time and energy to devote to the mayoralty fight. Had they given the attention to the City Hall that they gave to the Board of Education the Kiel machine would now be in the junk-yard with the Hiemenz-Heier-Lammert slate.

The outstanding feature on the Board of Education ticket was the smashing defeat of Hiemenz. The result was not only a stinging rebuke to the moving spirit in the spoils conspiracy that drove Dr. Withers from St. Louis but is a slapping reminder to Dr. Henry Gettys, Richard Murphy, and Stephen M. Wagner, who may yet be repudiated on the official count, that the days of political influence and of the politically influenced in school affairs are at an end. Their power in the board is now certain to be nil.

THE COUNTY UNIT IN MISSOURI

The legislature of Missouri passed a sweeping law organizing the state under a county-unit plan for the control of rural schools. The new law creates a county board of education made up of six elected members, each of whom is to be paid a *per diem* allowance for service, the amount not to exceed five dollars for each day and the days in a year not to exceed fifteen. A mileage allowance of ten cents per mile is also provided.

The duties of the board are outlined in the following extracts quoted from the law:

SEC. 16. The county board of education shall have power and it shall be its duty:

First: To appoint a county superintendent of schools for a term not to exceed four years. Said superintendent shall be not less than twenty-four years of age, a legally qualified teacher, a citizen of the United States, and shall have taught or supervised schools as his chief work during at least two years. . . . .

Second: To contract with the teachers of the respective local districts and fix salaries in accordance with a prescribed published classified salary schedule which shall be determined on the basis of (*a*) academic scholarship, (*b*) professional training, (*c*) successful experience in teaching. For the purpose of determining salaries, the county superintendent of schools, with the approval

of the county board of education, shall classify the teachers according to a salary schedule previously adopted by the county board of education. Provided, that the directors of each local district shall select their own teacher or teachers from an eligible list furnished by the county superintendent of schools.

Third: To elect, on nomination of the county superintendent of schools, such assistants, supervisors, attendance officers, and other employees of the county district as in the judgment of the county board may be necessary for the efficient administration of the school system, prescribe their duties, and fix their compensation. The state superintendent of public schools is hereby given full authority to prescribe the academic and professional standards of preparation for county superintendents of schools, their assistants, and supervisors.

Fourth: To have supervisory power over the care and keeping of all school property situated within the county school district; to co-operate and advise with the board of directors of the local districts and the county officers having to do with the administration of the schools.

Fifth: To change boundary lines of local school districts whenever in its judgment it becomes necessary; to combine two or more local school districts when needed for elementary or high-school purposes.

Sixth: To establish, govern, and maintain such high schools as said board may deem necessary. . . . .

Seventh: To prepare a budget setting out the total amount of funds received and disbursed by the said board during the current school year and also estimated amount of revenue required for school purposes for the next succeeding school year. Said budget shall be published in two newspapers of said county, except where only one newspaper is published in the county it shall be published in that newspaper, and for two consecutive weeks prior to the day for holding the annual school meeting. The expense of such publication shall be paid out of the incidental fund of the county school district upon warrants ordered by the county board and signed by the president and secretary.

Eighth: The county board shall have the exclusive power of levying annually a tax for school purposes of forty cents on the one hundred dollars assessed valuation of all taxable property situated within the limits of the county school district; and whenever it may be necessary for the county board of education to increase the annual rate of taxation for school purposes, such board shall determine the purpose and rate of taxation necessary to be levied on the taxable property situated within the limits of the county school district within the maximum rates prescribed by the Constitution for such purposes and shall submit to the voters of said county school district at the annual school election or at any other election called by said board and held for that purpose, ... and if a majority of the tax-paying voters, voting at such election on the proposition to increase the levy, shall vote in favor of such increase, the result of such vote and the rate of taxation so

voted shall be certified to the clerk of the county court in a manner similar to that provided in section 10 of this act, who shall on receipt thereof proceed to assess and carry out the amounts so returned on the tax books against all taxable property real and personal in such county school district. . . . .

Ninth: For the purpose of purchasing libraries, schoolhouse sites, erecting schoolhouses, furnishing the same, and building additions to and repairing the same, the board of education of the county school district shall have authority to borrow money and issue bonds. . . . .

Tenth: To make, on recommendation of the county superintendent of schools, all necessary rules for the classification of pupils and the governing of the local district schools of the county; to receive from teachers, supervisors, board of directors, and others having to do with the administration of schools, such reports and records as are required by law or by rule of the county board.

Eleventh: To furnish each school with all needed supplies and pay for the same out of the incidental fund of the county school district; to provide, as nearly as the incidental funds will permit, a permanent library for each local district and to make rules governing its care and use.

Twelfth: The county board of education shall, on recommendation of the county superintendent of schools, select textbooks for all schools in the county school district unless otherwise provided by law and, at its option, furnish such textbooks free to all pupils in any grade or in all grades of the county district.

SPECIAL CLASSES IN OAKLAND, CALIFORNIA

The Bureau of Research and Guidance of the public-school system of Oakland, California, recently issued a bulletin to the teachers and principals defining the various types of classes which have been organized in that city to supplement the regular instruction given in elementary schools. The bulletin is suggestive, not only because of the account which it gives of the efforts of a progressive school system to adapt instruction to the individual needs of pupils, but also because its precise use of a complete set of names for various kinds of classes prevents the confusion in organization which sometimes appears. There are cases in which the laudable plan of conducting special classes for backward pupils gets mixed with the equally laudable, but wholly different, plan of conducting special classes for children who are especially bright. When such mixed ungraded classes are set up, they often fail of their purpose because a single teacher can only with the greatest

difficulty keep up the various types of teaching which she is supposed to carry on.

The bulletin from Oakland is as follows:

There are four types of special classes now authorized in our schools: (1) special atypical, (2) special limited, (3) special opportunity, and (4) special accelerated. These classes differ from the regular classes because they are permitted to vary the content of the course of study or the rate of progress of pupils or both. No special class shall be organized without proper authorization.

All special classes will be organized only upon application filed with the superintendent in charge of promotions. The organization of such classes is under the direction of the supervisor of special classes.

Special atypical classes are for children who are found, by actual trial in school work and by mental test, to show such mental retardation that they cannot make satisfactory progress in a regular class with a reasonable expenditure of time and effort. The pupils in such classes have a mental retardation of three years or more. These classes are limited to an enrolment of sixteen pupils. The course of study varies widely from that of the regular classes, manual work being strongly emphasized. We now have eighteen atypical classes enrolling 288 pupils.

Special limited classes are for children who are so slow or dull mentally that they cannot keep pace with regular class work. The purpose of such classes is to accommodate the overage slow pupils, modifying the content of the course of study and the rate of progress so that such pupils may pass up through the grades, getting the most essential parts of the work of each grade and passing on for some training in the upper grammar grades or junior high school before the compulsory age limit is reached. Most of these pupils, if held to a rigid standard of regular grades, would reach the compulsory age limit and would pass out into industrial life long before finishing the ' nentary grades. Twenty-five to thirty pupils is expected to be the m mum enrolment. We now have forty-six limited classes enrolling approximately 1,200 pupils.

Special opportunity classes are for those children who have good mental capacity but, because of lack of progress, due to illness, moving about, or other cause, are working in grades below where they should be. The purpose of these classes is to give such help as is needed quickly to adjust the pupil to take up work with a regular class which fits his capacity and needs. We now have sixteen opportunity classes enrolling 325 students.

Accelerated classes are for those pupils who have superior capacity. They may take an enriched program or progress more rapidly or both. Any group of children moved on together from one class toward a higher group at a rate more rapid than normal should be classified under this head.

A great deal of provision is being made throughout our schools for individual attention to children of superior mental capacity. As a result of a recent research study we have data to show that very definite and consistent effort is being made by teachers and principals generally to give our superior children special opportunities that their capacities warrant. A total of 2,583 children, or more than 10 per cent of our elementary-school enrolment during last term, were receiving some special opportunity to use superior mental capacity. One thousand seven hundred and thirty-five of these children were given opportunity to move forward at a more rapid rate than normal, at the same time covering an enriched curriculum, while 689 were given an enriched curriculum without extra speed. This means that while a little more than 10 per cent of our elementary-school children were receiving special attention, only about 7 per cent were receiving recognition by more rapid advancement, while all of them were profiting by a broader and richer program of study.

SCHOOL SAVINGS BANKS

The thrift campaigns which were carried on during the war have been forgotten for the time being in many quarters. A period of extravagance followed the repressions of 1917 and 1918. There is the more need that schools take up in some practical way the duty of teaching children how to save. The following statement supplied by Ralph Decker, superintendent of Sussex County, New Jersey, gives an illustration of the way in which a group of rural schools are co-operating in a movement to inculcate the idea of thrift in the minds and practices of the children in a rural region.

After the war it became evident that we needed a substitute for the stimulus toward thrift that the needs of that time had supplied. The school savings bank for individual schools, of course, was not new, but a county system for the schools of a whole county was. It offered possibilities, and we began to work it out.

After formulating our plans, our next step was to call the bankers of our county together. Our plans were placed before them for criticisms and suggestions. As a result of our conference, we planned to establish a bank in every school. The bankers were so well pleased that the County Bankers' Association provided funds for the printing of all blanks for the use of the banks.

In the one-room schools the teacher was to be the banker. In the larger schools the principal would designate one of his teachers to have charge of the bank, and she could have pupils in commercial courses in the high school, or perhaps some eighth-grade pupils, assist her.

Our banks were made to conform to those used in actual banking and consisted of deposit slips, identification cards, pass books, day book sheets, ledger cards (exact duplicates of pass book), and checks. By the use of these the pupils obtain a knowledge of banking methods and bank paper, a knowledge much needed, according to the testimony of our bankers.

The banks were to be kept open for a period twice a week, and at the close of banking hours the money deposited was to be checked up and then deposited in some convenient bank in the name of the school bank making the deposit.

As soon as a depositor has $5 on deposit, he is urged to open an account with the savings department of some bank in his own name and then to use the school bank for small savings from which he will from time to time add to this savings account.

Our banks opened December 1 last, and in three months ending March 1 we have a little over 1,500 depositors with nearly $3,100 on deposit. This, in a school population of about 5,500, we consider a good beginning.

THE SMITH-TOWNER BILL

Representative Towner has once more introduced the bill creating a department of education in the federal government. It is somewhat modified in form, chiefly through the addition of an advisory council to co-operate with the proposed secretary. Evidently the advocates of this bill did not succeed in persuading the President of the wisdom of their proposal. His message favors a composite department of welfare and is therefore a clear repudiation of the proposal presented by the National Education Association.

The bill was not strong enough to stand alone. The reasons why the bill should be radically modified have been repeatedly presented in the *Elementary School Journal*. It has been pointed out again and again that the bill in its original form, and even in its amended form, is not what the proponents of the measure have claimed for it. To the pleas for revision there has been only one answer, and that is the statement that so and so many people have indorsed the bill. In the main, it has not seemed wise to answer this kind of statement. There came, however, to the editors of the *Elementary School Journal* some days ago an editorial from Montana, from the *Cut Bank Pioneer Press*, which puts so clearly the answer to the usual type of propaganda for the Smith-Towner Bill that a part of it will be quoted.

Frederick J. Haskin, a special writer for the press at Washington, D.C., wrote an article to the *Great Falls Tribune* a few days ago in which he advocated the passage of the Smith-Towner educational bill. Mr. Haskin's letter was filled with what the movie fan would call sob-stuff. Our school system is breaking down, said Mr. Haskin. We are ninth in standing among the bigger nations when we ought to be first. And you would almost conclude that our school teachers could neither read nor write if you didn't make some allowance for the mental anguish under which Brother Haskin labored with his typewriter when prophesying the downfall of education in the United States.

Mr. Haskin believes that all this can be quickly remedied by a federal director of education and a small barrel of gold—one hundred million dollars a year the Smith-Towner Bill now in Congress calls for. The trouble with our system now is that it lacks unity and direction. Each state has its own ideas—and they are not very good ideas, according to Haskin. But at the end of the article he seems to destroy all the logic in his laboriously constructed article by declaring that the states would forfeit little of their present supervision over education. If that is so, why a federal director?

We are very much puzzled over this Smith-Towner Bill. There are some features connected with it that sound good. But is it not open to all the objections raised against government "sticking its nose" into state affairs?

And again we are puzzled when we note that many of those who have grown red in the face and vehement in speech against government dictation are in favor of this bill. Here, for instance, is Senator Hoke Smith of Georgia, a statesman from the hotbed of states-rights section, coming out in favor of this bill. How can this be explained?

We have seen it stated that the Catholics and Lutherans are the only forces of opposition to the bill, that they fear federal dictation of our educational system will mean interference with their schools.

But this seems to be a little chunk of mud thrown into the clear stream of discussion, for we find that the American Bankers' Association has gone on record as opposed to the bill, and practically every educator in the country is opposed to it. Such men as Hibben of Princeton, Hadley of Yale, President-emeritus Eliot of Harvard, Kinley of Illinois, West of Princeton, and Burris of Cincinnati have come out against it with strong arguments. Governor Miller of New York, one of the keenest minds in the country, has just made a powerful declaration of opposition to the bill.

News Items from the School of Education of the University of Chicago

METHODS COURSES FOR ELEMENTARY-SCHOOL TEACHERS

Although the courses which are given in the School of Education are planned primarily for superintendents, principals, and supervisors, nevertheless a large number of special-methods courses for elementary-school teachers have been included in the program for the Summer Quarter. They are listed below by departments.

History.—"Organizing Upper-Grade and Junior High School History for Teaching Purposes" emphasizes the selection, organization, and standardization of historical material for use in the upper grades. Much time is given to the problems of United States history in this course. "The Technique of History Teaching in the Upper Grades and Junior High School" emphasizes in detail the methods of teaching historical materials in these grades. "The Teaching of Community Life and the New Civics in Junior and Senior High Schools" emphasizes the aims and organization of subject-matter and the methods of teaching community life and civics in the upper grades and high school. A course is given in the Kindergarten-Primary Department which emphasizes the methods of teaching community life, history, and civics in the lower grades.

English.—"The Teaching of English in the Intermediate and Grammar Grades" emphasizes the selection of subject-matter and the methods of instruction with special reference to oral and written composition in the fourth, fifth, and sixth grades. Some attention is also given to the problems of the seventh and eighth grades. "The Teaching of Reading in the Intermediate Grades" emphasizes the methods of teaching oral and silent reading, the selection and organization of reading-materials correlated with history, geography, and science, and points out the relation of reading-instruction to the problems of teaching children how to study. "The Teaching of English in Junior High Schools"

considers the organization of a course of study which emphasizes silent reading, individual instruction, the correlation of English with other subjects, the socialization of the recitation, and the use of objective measurements in English instruction in the seventh, eighth, and ninth grades. A course is given in the Kindergarten-Primary Department which emphasizes the methods of teaching reading, language, and literature in kindergarten-primary grades.

Mathematics.—"Methods for Primary and Intermediate Grades" considers the purposes, plans, and methods of mathematics instruction for Grades I–VI, inclusive. "Mathematics for Upper Grades and the Junior High School" discusses appropriate types of mathematics instruction for the seventh, eighth, and ninth grades. Recent programs of mathematics instruction are considered in detail.

Geography.—"The Teaching of Geography in the Grades" emphasizes the problems of geographic instruction in Grades IV–VIII. The technique of teaching geography in accordance with the problem method of teaching is emphasized. "The Organization of Geographic Problems" deals with the purposes of geographic teaching, the principles of selection and organization of appropriate units of instruction, and detailed outlines of effective problems in regional geography. "The Principles of Human Geography for Grade Teachers" provides instruction in fundamental geographic principles.

Natural Science.—"Elementary Science: Plant and Animal Life" familiarizes grade teachers with the common plants and animals and their value. "Elementary Physical Science" familiarizes teachers with the materials and methods used in elementary science work in the grades. "The Organization of Elementary Science in the Grade Curriculum" considers the purposes of elementary science, the principles of organization, the materials of instruction, the literature of elementary science, and effective methods of instruction. "The Teaching of Physiology and Hygiene" emphasizes the aims, subject-matter, and methods of instruction in this subject. "The Teaching of General Science" deals with the organization and methods of instruction in general science in the seventh, eighth, and ninth grades.

ANALYSIS OF LEARNING PROCESSES AND SPECIFIC TEACHING[1]

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There was once a boy who was shown by standard tests in arithmetic to be deficient in subtraction. A further fact was that he was shown by the same tests to be unusually strong in multiplication. This boy illustrates in a very impressive way a fact of the broadest and most general significance. We shall not concern ourselves for the moment with his private difficulty in subtraction; we are interested in his case as revealing the contribution which tests can make to classroom work and also as showing the limitations of tests. This boy's progress in arithmetic was undoubtedly affected adversely by his lack of mastery of subtraction, and the tests did him and his teacher a great service in making clear the exact point at which his deficiency was to be found. The limitations of the test appear in the fact that it does not tell the teacher what to do with the case. If the teacher is to cope successfully with this boy's educational needs, there must be something more than the test. There must be an explanation reaching back into the boy's method of subtraction which will show why he was weak in this particular. There must be an analysis of the case more fundamental than that which the test makes. The test was only a first step.

In the particular instance under consideration the analysis was performed by Professor Uhl, who reported the case. It was found that when this boy was asked to subtract 9 from 46, he turned the problem into one which could be solved by the use of his highly perfected multiplication table. Starting with the 46 which was given, he set aside 1 so as to secure a number that should be an exact multiple of 9. He then disintegrated his 45 into five 9's and

[1] Paper read at the general meeting of the Department of Superintendence of the National Education Association, March 2, 1921.

dropped one of the 9's, thus performing the subtraction called for. After getting rid of his 9 by this roundabout method he restored the 1 originally set aside and thus arrived at the final result.

The analysis of this boy's method of subtraction explains at once why he was slow. The complex series of steps which he took explains why he often fell into error in subtraction. The analysis also reveals why he was able to pass the multiplication test with a high score. Finally, the analysis shows the teacher exactly where instruction must be applied if the boy is to be helped to improve and also what instruction must aim to do.

This paper is a plea for such analysis. Much of our teaching in the past has been less successful than it should be, not because teachers have lacked in industry or devotion to their work, but because they have not been able to apply their efforts specifically and directly to the center of the pupil's problem.

Suppose, for example, that the teacher in the case cited had blamed the boy for his slow subtractions and had disciplined him as a wanton failure; would good have come from the punishment? When a child is operating with wrong intellectual methods he does not know it. In the intellectual world in which he lives, the method that he uses is the accepted method because it is the only known method. To say to a child that he is wrong does not help him. The teacher is in the classroom and in the study-room for the specific purpose of analyzing pupils' efforts and discovering where difficulties arise.

Analysis which shall lead to specific teaching is the new movement in the science of education which naturally follows the testing movement and supplements it. We are at the opening of a new era in the scientific study of educational problems. The testing movement has for the last decade been in process of establishing itself. Most of us can remember the skepticism with which the early tests were received. There was an intense emotional recoil against the showings of those early tests which had to be outlived. It is little wonder that school administrators and students of education have been absorbed for years in the working out of tests and other devices of measurement. Time and effort were required to perfect and introduce them.

Today the testing movement may be said to be fully accepted. No one seriously questions the possibility or desirability of measuring school results. Yet, at the moment of the most complete success of the testing movement there seems to be a lack of enthusiasm which is so baffling in its significance that some observers have thought of it as a symptom of decline.

Everybody gives tests in all the fundamental subjects, but many people regard the resulting scores as quite useless for practical purposes. What does one do about the matter when he finds a school or an individual pupil below standard? In a great many cases surveyors of schools have reported tables of figures showing that this or that is not well done and have then left town apparently deaf to the question: What is to be done to improve the situation?

I say again that it is easy to understand why the science of education had to spend much time and effort in measuring results. Indeed, today, as formerly, the best way to bring a school system to its feet is to test results. But we are mature enough in the application of scientific methods of education to enter upon a second era, the era of constructive, positive correction of defects. This will be the era of analysis and of specific teaching. No more are we to be content merely to measure results; we shall try to understand results and consciously produce a new kind of result by dealing with causes.

Another example which will illustrate what I am saying can be drawn from a field in which testing has been until very lately altogether infrequent, namely, from the high school. A few months ago President Brown of the Oshkosh, Wisconsin, Normal School published a monograph giving the results of extensive tests which he had made in the Latin classes of New Hampshire when he was connected with the department of public education of that state. President Brown's tables require careful study and yield certain results which he himself has not noted. The particular fact which we may select for our present purpose is the striking fact that pupils gain practically nothing in the power to read Latin during the third year of their study. The results of second-year Latin are meager, but the results of the third year are zero.

I imagine that there will be a great deal of hysterical repudiation of these findings by many Latin teachers. It is always thus when unpleasant revelations are made. Human nature strikes out blindly in self-defense whenever it is attacked. In due time, however, we may look for a saner reaction. The facts which are plain enough will be faced. Third-year Latin is a conspicuous failure. This is the showing of the tests and the unquestionable fact. When the fact is thus accepted, Latin teachers will begin to ask a new and really significant question, namely, the question: What is the reason for the failure of third-year Latin?

When this rational question emerges there will be ushered in a new era of Latin teaching and a new attitude of analysis of Latin problems. There will begin a movement which will carry progress beyond the tests farther than tests have carried us beyond the original state of mere complacence with conventional teaching.

Let us try a hand at the kind of analysis which should follow the Latin tests. The third-year pupil fails to make progress because he has very bad habits of dealing with the Latin text. He picks out his translation word by word. He spends most of his time with his finger in the vocabulary hunting up a possible meaning to fit into the puzzle which he calls an English sentence. This set of habits is what the pupil acquired during the first and second years of his study. We may be willing to defend the vocabulary habit in the early stages. Perhaps it is a legitimate first method, just as creeping is a legitimate first method of personal locomotion at a time when one commands no better. But there comes a time when creeping must be superseded by something more expeditious and effective. So it is with Latin. There comes a time when, if the study of this subject is to be of value, it must carry the pupil over a sentence at a time, rather than a word at a time. There comes a period in the pupil's development when reading ought to mean in Latin what it means when the learner is able to get from a page of the vernacular real ideas and coherent thoughts. The vocabulary method of translation bars the pupil from this kind of free, intelligent reading. The vocabulary method when carried up into the higher levels of the course is as abnormal and as backward as would be the imbecile creeping of a full-grown man.

If the analysis suggested is in any degree correct, it opens the way for a series of experiments by Latin teachers which will be sure to be productive. The cycle of evolution will then be as follows: first, the test to show the present condition; second, intensive analysis to explain the result; third, experimentation to improve the situation; fourth, more tests; fifth, more analysis; and so on.

In one sense there is nothing new about all this. Teachers of every generation have done something of the sort. For that matter, there is nothing new about any of our modern science. Men have always observed nature and have always followed their observations with new efforts to adapt their behavior more intelligently to what they have seen. Yet we know there is in modern science something essentially new. To the earlier, cruder observations of primitive man have been added devices and equipment for more exact observation. Analyses have been made more intensive and far-reaching, and adaptation has become more energetic and specific.

What modern science has meant in other spheres, educational science should mean for our school work. Teachers of experience have always improved their teaching by analyzing situations and by changing their methods in the light of their analyses. Educational science is a refinement of what good teachers have always done. The testing movement was the first stage of this science and made possible an exact evaluation of the results at which we have arrived by our present methods. The testing movement was a decided refinement of earlier methods. The analyses which I am advocating as guides to specific effective teaching are refinements of what was done earlier in some degree by good teachers, but done all too little.

Furthermore, the science of education will have to improve along another line which has characterized the progress of modern science in other fields. Science has added to human equipment for co-operation in analysis and experimentation. No physicist or astronomer works today in isolation. The group co-operates in the development of what we call objective analyses and objective results.

So must it be in the science of education. Many an excellent teacher has carried to his grave insights which would have been of immense value to his fellow-teachers. The loss of these insights is due to the fact that in education we have developed only limited means for making wise analyses the common property of all. We are just beginning in education to learn how to pool our experiences. I believe the decade that has passed, with its intense discussions, has been nothing but the training school for a mature science in which observation will become as common and as objective as in any sphere of investigation.

It is my profound faith in co-operative analysis of school situations which gives me courage to believe that the student of educational science in his laboratory and the classroom teacher may both contribute to the development of better teaching. I look forward to the time when our educational literature will include in large measure statements by teachers of cases with which they have been able to deal. There ought to be a great many reports like the one which I quoted of the boy whose subtraction had gone wrong. There ought to be a great many experiments on how to follow the vocabulary habit in Latin with something more productive. When we have many such reports the spirit of analysis among our teachers will be fostered, and there will be a great deal more of what I have called specific teaching.

There will also be a greater taste for the kind of material that my colleagues of the educational laboratory produce. Of course, I am selfishly interested in getting a wider attention for laboratory work, not because it seems to me different in spirit from what good teachers do, but because I believe that the best teaching requires analyses which can be made only with the aid of laboratory methods.

An analogy may help me to make clear what I mean. There will never be a time in medicine when the practicing physician in direct contact with the patient will not be necessary. But there is a growing recognition on the part of the doctor of medicine of the importance of the laboratory man who stands back of him. The modern doctor is constantly using the laboratory analysis to check and help his practice. This is what I am advocating in education as an aid to better teaching.

Let us take a concrete example. My colleagues and I use in our study of reading elaborate apparatus which photographs the eyes of readers. The ordinary teacher used to think of such apparatus as very remote from her classroom work. I remember when Huey published his book in 1909 a great many teachers said that it was not practical and doubted whether the reading of the book was worth their while. But the work which was just beginning in 1909 has been slowly carried on by others. Laboratory analysis is a slow, laborious task, requiring more time and equipment than most people realize. The result of twelve years of work has, however, justified all that has been expended on research.

I wonder how many of you realize the extent to which our schools are today engaged in a fundamental reform as a result of the scientific studies of reading. The distinction between oral and silent reading is a direct product of these investigations. Huey pointed out in a general way the importance of the distinction twelve years ago. It remained for the later, more complete investigations of my colleagues to establish the distinction and make it useful to teachers.

The importance of clear insight into the distinction between oral reading and silent reading can hardly be exaggerated. The whole fabric of school life is made up of reading. In general, primary teachers begin well in the teaching of reading. The middle grades and upper grades have in the past failed dismally to do their parts effectively. Upper-grade oral reading is quite as stagnant as third-year Latin, and for reasons not unlike those which we reviewed in the earlier case. Oral reading in the upper grades is a slow, clumsy form of reading, tending to impede the pupil's intellectual progress. Oral reading is a perfectly legitimate form of reading in the primary grades. It is the natural and proper introduction to reading. The analogy of creeping to be followed by walking is altogether legitimate and instructive here. The child must first read by relating printed words to his oral speech. He ought later to read without oral speech.

All this is perfectly clear when one has the laboratory material on reading in hand. Photographs of the eye-movements of readers show that immature reading involves looking at each word as a

unit. The eyes pause on each word long enough to make recognition possible and to allow for the slow reaction of pronunciation. The reading of a mature reader is of an entirely different type. The eye now takes in, not the single word, but a whole phrase; and its movements are more rapid because there is no delay in waiting for pronunciation.

As soon as we understand the character of silent reading and oral reading, we are able to organize our classroom work on a sound scientific basis. At the present time we are in the beginnings of this organization. Enough analysis of these two kinds of reading has been made to send the word abroad among educational people that they will have to make over the school program in reading. Enough interest has been aroused to make this one of the richest and most influential fields of inquiry.

There are two reasons why such inquiry is delayed. I shall comment on these two reasons because I believe that the possibility of improving teaching through the application of the science of education depends on our ability to find some method of setting aside the obstructions.

The first reason why the distinction between oral and silent reading has been only moderately useful to teachers is that the distinction has not been clearly understood. As a result, instead of being thought of as a detailed description of a difference between two stages of development, it has been treated as a kind of partisan issue. It has been scoffed at by some and overworked by others. There is a great deal of personal prejudice in our profession. Some teachers say the whole thing is a myth. They like oral reading; they know how to teach it, or think they do, and they are going to retain it. Put in terms of our present discussion, such teachers have never appreciated the value and helpfulness of analysis. They prefer to teach in a general way rather than to give well-directed, specific instruction.

At the opposite extreme are some people who, having heard that the distinction between oral reading and silent reading exists, forthwith desire to throw away for all time the old. Let the first grade have only silent reading, they say. They argue from the fact that adults read silently and gain advantage therefrom to

the conclusion that silent reading should be cultivated from the first, that oral reading is a pernicious and useless invention of a bygone age. Such extreme reformers herald their doctrine in the most unqualified and absolute terms.

Both of the groups whom we have described, the scoffers and the exclusive silent readers, are wrong. They delay the analysis which will set the whole matter right by their violent partisan attitudes. They have not caught the spirit of true scientific procedure.

The second reason why the inquiry into the distinction between oral reading and silent reading progresses slowly is one that I wish I had the power to set forth so clearly that we might instantly overcome it by going to our respective places and energetically introducing a much-needed reform. The school system of the United States is absorbed in routine. We give little or no energy to analysis of what we are doing. The time was when the factory also was absorbed in the routine of making things. But the factory has long since learned that it can well afford to invest in thinking about its work. The best factories have laboratories to which problems of manufacture may be referred. These laboratories are not charity institutions; they are not things apart. They are centers of life in the establishment.

I am frank to say that I grow discouraged at times with some of the school situations in this country where administrators and teachers are unwilling to spend the time necessary to consider their fundamental problems. I grow discouraged when I find that the work done in our reading laboratory, for example, reaches only a comparatively few people. I grow discouraged when I encounter people who think of a scientific laboratory as an institution located in the clouds, if not in a fog. We are a generation of busy, rushing routinists. We plunge into the day's task and are industrious enough to satisfy our various consciences, but we are not willing to absorb ourselves in careful analysis. Too often we are not willing to absorb ourselves even in the study of analyses made by others.

For my part, I shall go on advocating analysis of school situations as the most important need of the times. I shall say what I

can to encourage the experienced teacher or administrator to stop for a time for the study and comprehension of what is going on. I shall say to young men and women who are inexperienced but are looking forward to a career of teaching: Take time now in your preparation to look into school situations and see what they involve. I shall try to pick out the most promising candidates and encourage them to carry on the long, arduous studies which in the long run will redound, as does all truly scientific thinking, to the advantage of all.

Especially shall I seize every opportunity which presents itself to ask administrative officers to see the importance of analyzing the situations with which they deal. I often come in contact with people who want to be given the results of scientific studies without giving themselves the pains to make any contribution. The fact is that the only way one can understand scientific analyses is to make some one's self. Every physician is a scientist and is successful in so far, and only in so far, as he analyzes his patients. Every judge or lawyer who serves the community in the highest degree must understand the fundamentals of jurisprudence and must be a keen analyst. So it is also in our profession. There is no room in the higher positions for a mere routinist. Analysis and re-analysis are the price of the highest success.

If each of us in his own way would adopt some method of promoting analysis, there is no reason why the new era of analysis and specific teaching should not come in with a rush. Let the school administrator encourage his teachers to study intensively a few cases each year and record the results. Let the superintendent show the principal that it is his chief duty to throw light on school problems by making an intensive analysis of them. Let boards of education be brought to understand the importance of investing public funds in such analyses, even to the extent of supporting laboratory work. Let the teacher who shows skill and insight in such work be assigned to tasks which will most productively utilize his or her ability.

This, then, is my urgent plea for a new movement in the science of education as the best and most promising method of securing better teaching.

IDEALS AND ACCOMPLISHMENTS OF THE NEWARK SCHOOL SYSTEM

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The belief which animates the people of Newark is that the children of the city constitute its chief asset, and the great civic ideal is to provide in a liberal manner the inestimable privileges of education. The facilities of the school system are available for community service and there is active effort to instruct not only the foreign adult but all who seek self-improvement and advancement. The feeling is clearly defined and often expressed by citizens that the amount of money expended is of less concern than that it shall be wisely spent to insure equal and adequate educational opportunity for all.

The ideal which animates the management and leadership of the schools is that education consists not only in the attainment of knowledge but in the formation of right habits, the acquisition of requisite manual and intellectual skill, and the development of personal power and worthy character. It is apprehended that in the long sweep of man's upward struggle education for the people, especially American education, is comparable in its possibilities for the benefit and the uplift of humanity to the development of Hebrew literature, Greek philosophy, Roman law, and Anglo-Saxon constitutional liberty, those forces in the domain of the human spirit that have molded the civilization of the most progressive nations of today.

One of the great ideals of the school system is the *conservation of health* so that pupils may be strong and physically fit. The aim is not only that individual personal improvement shall be made but that a nation of hardier men and women shall be developed. The accomplishments include existing health clubs and health associations organized to form health habits based upon the instruction given in hygiene. The course in physical education includes

play, dancing, swimming, calisthenics, gymnastics, and athletics. Most of the schools have well-equipped gymnasiums, and there is a large athletic field where competitive games and athletic contests are held. Much attention is given to mass athletics, the theory being that the varsity teams have their place in fixing standards of athletic prowess and in creating loyalty to the several schools, but that all students must be trained for physical endurance and achievement.

Play is recognized as of great educational value. All but one of the regular schools have well-equipped kindergartens. Games are played in the elementary grades, and organized play is substituted for the old-time disorderly recess. The playground system comprises after-school, summer, and all-year playgrounds. The last were, until two years ago, operated under the Municipal Playground Commission. The Board of Education now controls all organized play activities. The program includes social and recreational centers open at night, where clubs meet and games and dancing are encouraged under supervision.

The city is divided into medical inspection districts with a physician in charge of each, and with trained nurses assigned to the several schools. The medical department is under the Board of Education. It has its own building and its own clinics for dental, optical, and orthopedic cases. At first specialists in the city gave their services gratuitously, but there are now paid clinicians. There is an advisory board of three distinguished physicians who serve without remuneration to aid the medical and physical-education departments in the corrective work in orthopedic, goiter, and cardiac cases. The psychological clinic has a specialist of broad training and extensive experience with two trained assistants, and another specialist who assists in the mental examination of children.

Still another great ideal is *preparation for a vocation* in order that all may be producers of wealth, each able to do his part in a democratic society. It is evidenced first in the prevocational work done in the special activities in the alternating schools. These activities are gardening, cobbling, printing, typewriting, woodworking, electrical wiring, mechanical drawing, sewing, cooking,

and costume and other designing. In these schools daily recitations in double periods in some one of these activities are provided for both boys and girls. The definite purposes are to obtain full educational value of the subjects and to discover the aptitude of each child for manual work.

The evening schools provide not only work of similar nature and about the same scope for youth and adults, but some work more clearly vocational which appeals to those employed in the trades who desire to improve themselves. We have a school of industrial arts with a large evening enrolment. The teachers are skilled artisans from the shops of the city and artists engaged in the practice of their respective occupations. This insures highly specialized instruction. The purpose of the school is to prepare students to unite the skill of the trained artisan with the knowledge and taste of the artist so that utility and beauty may be combined in manufactured products. Through schools of this type America may eventually lead the world in the industrial arts.

The vocational work consists of continuation classes in factories, continuation schools of the prevocational type, and vocational schools. The factory classes are fewer than we desire, but we hope that, the war ended and other retarding conditions removed, they may soon rapidly increase in number. Their usefulness is great in that they afford a means of broadening the education of the worker in his special field. The continuation schools were opened in September last and are for children between the ages of fourteen and sixteen to whom "age and schooling certificates" have been issued. The intent is to provide instruction for six hours per week of an academic and prevocational character, giving to each equal time. There is a vocational school for boys and one for girls. The range of their work is that usually found in schools of this type. The object of these schools is the preparation of students for productive work in the industries. The Board of Education is now constructing a new building to accommodate eight hundred boys, at a cost of more than a million dollars. It will be equipped with modern machinery and appliances. Doubtless it will favorably affect the industrial life of the city through the ability and efficiency of its graduates.

There are other types of school work not generally called vocational—the art, the commercial, and the academic. We have in the Newark high schools a curriculum which provides for the election of four years of either music or art as majors, thus permitting gifted students in either of these fields to obtain a good, general high-school education while studying the special vocational subject. The commercial curriculum provides, in addition to the special technical subjects of the bookkeeper, clerk, or stenographer, that cultural subjects shall also be studied. The academic curricula have for their objectives normal-school or college admission with a professional career in mind and are vocational in that they are prerequisites for study in higher institutions. The school, no matter what general aims it may have, provides, either immediately or mediately, preparation for vocational activity of some kind. Young Americans look foward to useful careers in adult life. It is desirable to inaugurate a system of educational guidance founded upon psychological tests that shall eventually assist pupils to select the type of life-work they may be by native ability and training fitted to do efficiently.

The dominant educational ideal of the Newark school system is the development of sterling character. To achieve it there are three subsidiary ideals, namely, to make the instruction in the schools vital and not formal, to make the school organization flexible and comprehensive, and to make capable and successful teachers as happy as possible.

The chief subsidiary ideal in our schools is that *instruction shall be vital and purposeful*, not merely formal; that it shall definitely mold character according to the highest standards in order to make the social adjustments of the individual self-directive, co-operative, and altruistic. To accomplish this, courses of study have been simplified and modernized. An example of the progress made is in the teaching of reading and literary appreciation. The high schools complain that the elementary schools "poach upon their preserves" in the use of the masterpieces. In each upper elementary grade a play of Shakespeare is read, not for structural analysis, but for enjoyment. Civic, economic, political, and other important questions are discussed in a manner that would be

creditable to adults. The results of the instruction have been tested in a number of surveys of the essential subjects conducted by our own department of reference and research. Two series of educational meetings are held each year by members of the superintendent's staff for the direction and inspiration of teachers.

Children of fortunate parents are well equipped to profit by instruction when they enter school because of favorable environment and association. There are many under-privileged children in the schools who lack this preparation. We have discovered that in our bilingual schools the best-informed and most capable children are the truants whose excursions from home and school have enriched their knowledge and language and developed their minds. We have in the school system a secondary means for providing this enriching experience in a department of visual education, well organized and well equipped with a central film library and with apparatus in many schools for showing the pictures. Programs are arranged in the superintendent's office and are planned for instruction and not entertainment. This department provides the opportunity for privileged as well as under-privileged children to broaden their knowledge by observation in widely extended fields.

Another means to make instruction function as vitally as possible is an important experiment in the classification of children in the Newark schools now well inaugurated. The standard size of classes is thirty pupils in grades above the seventh, and forty pupils in grades below the eighth, but smaller classes are authorized in shops and special departments, and in cases where the right grading requires it. The plan is to have classes of reasonable size and to make them as homogeneous as possible and to adjust the subject-matter of instruction in both quantity and quality to the ability of the children. The scheme of classification is:

I. The supernormal children, or those intellectually superior.
II. The normal children, divided into three main groups:
   a) The *ones*, those intellectually bright and able to do work of three five-month terms in two.
   b) The *twos*, those ordinarily capable and able to do the work of a five-month term in five months.

c) The *threes*, those slow, but able to do the work of a five-month term in approximately seven months.

III. The subnormal children, divided into three groups:

a) The moral defectives, those incorrigible or chronically insubordinate.

b) The physical defectives, such as the deaf, or otherwise physically handicapped.

c) The mental defectives, the morons, and high-grade imbeciles.

It is estimated that about 2 per cent of the school population is of superior intelligence and that these children are deprived of their rights by hampering conditions in ordinary classes. The desirable plan is to segregate them, to afford them ample opportunity to gain time in their educational career, and to provide instruction fitted to their capacities and needs. We have not yet fully developed our plan, but it is reasonable to assume that in due time there will be centers established for these children. Temporarily the supernormal are classed with the *ones* of the normal division. In large schools it is possible to have whole classes of *ones*, or *twos*, or *threes;* in small schools it is necessary to have two separate groups in the same class. It is desirable, for programming reasons, to have whole classes, whenever practicable, of the same level of intelligence. The instruction can then be adapted to the children. When any grade of work has been finished, in either the bright or the slow classes, examinations are held, and those found fit are advanced, necessary adjustments being made at any time. We have restoration classes in the elementary schools for those who for any reason have fallen behind, and coaching or service classes in the high schools. During the summer, elementary and high schools are maintained to assist pupils to improve their work and to gain time by extra study.

It is clear that we cannot use the same standard of accomplishment in these different classes. The *twos* are not able to do the same quality any more than the same quantity of work as the *ones;* nor is it possible for the *threes* to compete with the *twos*. There must then be recognized three different treatments of the same subject: that for the *threes*, limited in nature with much formal

drill; that for the *twos*, not so formal but broader in scope with more associations; that for the *ones*, even broader in character, including more content and a study of relations, such as cause and effect. The three treatments may be termed the *mechanical*, the *conventional*, and the *philosophical*. Different programs of study may be developed in time for these different groups of pupils in order to meet the needs.

The treatment of the subnormals probably does not differ from that of other large school systems in the country. A few observations, however, may be of interest. The moral defectives are transferred, when necessary, after full investigation by the department of compulsory attendance, to schools distant from their homes, on the theory that a new environment and new associations may effect reform. If not successful, they are, after examination by the psychologist, sent to special schools called ungraded schools where every effort is made to adapt the instruction to the pupils. This is usually effective, but when it is not they are taken by court action from their ignorant parents and street associations and committed to the Newark City Home, an institution maintained in the country, where every possible provision is made for their welfare and education.

We are segregating as rapidly as possible all mental defectives in order that regular classes may be homogeneous. The policy in reference to such pupils does not include the isolated class, but a "Binet center" with a standard unit of at least five classes. This permits close classification and instruction under the departmental plan. The results from this policy may be judged by a study recently made of one hundred pupils to determine whether the instruction functioned to a reasonable degree. Eighty-eight of the hundred *graduates* followed up are successful in maintaining themselves and in their home occupations. Twelve are waste on the social sea. The facts indicate that the instruction does function.

Another plan in making instruction function as vitally as possible is the method of teaching the manual arts and some other subjects of the curriculum. In Newark manual arts were taught for many years by giving one lesson a week in all grades, with the exception of domestic science in Grades VII A and VIII A in place

of domestic art. The one-lesson-a-week plan did not afford sufficient time for pupils to acquire the desirable skill. The lessons were so far apart that interest was sporadic rather than cumulative, and much of the instruction needed repetition. We have introduced what has come to be called the "intensive method" of teaching the manual arts. This method consists of a lesson each day for boys in manual training and one each day for girls in domestic art or domestic science for a period of approximately five weeks, followed by the subjects of music, hygiene, and civics for an equal period of time. Drawing every day is then substituted for another five weeks, and so the alternation continues. The total number of school days in a five-month term is divided by four, which gives the exact number of consecutive lessons possible in these various subjects. By experiment it was demonstrated that the interest of pupils was greatly increased and that it was possible for them to acquire greater knowledge and skill because of the closer sequence and continuity of the work. The plan has been extended throughout the city and is giving marked satisfaction. The opinion is that the results are superior. The manual arts are under the direction of one head in order to secure the best possible co-ordination.

Another subsidiary ideal is that *the organization of the school system shall be as elastic as possible*. Newark has an all-year system of schools within her traditional system. There are ten of these schools ranging in enrolment from 1,522 to 2,568 pupils. There are elementary schools, two special schools, a junior high school, and a senior high school. There are four terms of twelve weeks each, with vacations coincident with those of the regular school system. It is possible for the capable children to cover the elementary course in six years instead of eight and the secondary course in three years instead of four. These schools were established for the people who desired their children to get through the schools as rapidly as possible. In normal times approximately 75 per cent of the children attend throughout the summer. Children who cannot keep the pace and must repeat grades have shorter periods of repetition. The plan is flexible and lends itself to the needs of the children. Those capable of gaining time have the

privilege; those who should not gain time need not be retarded beyond the period that they would have attended the traditional schools.

The traditional schools in Newark are being supplanted by the alternating or modified Gary schools. They begin at 8:30 in the morning and close at 3:45 in the afternoon. The plan of organization is valuable, because it primarily affords better educational opportunities. This kind of school is elastic and dynamic, while the traditional school is rigid and static. The alternating school, now a lusty infant, may be criticized by the conservative, but it is clearly evident that the faults are due to maladjustment and not to fundamental or organic defect. The plan of organization affords the needed opportunity for teaching an enriched curriculum.

Newark is developing, too, a system of junior high schools consisting of the seventh, eighth, and ninth grades. At the present time none of these schools is in a building of its own, but all are in large elementary schools where the appeal of the new opportunity to begin secondary work early is an effective means of keeping the pupils in school for one more year. It is a well-known fact that great numbers of pupils do not survive the first year in the secondary schools; hence it is better to make the ninth year a goal from which pupils may depart, accredited as graduates of the junior high schools, rather than have them withdraw as castaways from the senior high schools. More pupils stay to finish the junior high school course than formerly remained for the first year in the senior high schools. The secondary schools will unquestionably be able, with the junior high schools acting as selective agencies, to maintain the high standards of academic scholarship which they greatly prize and which are somewhat jeopardized by the urge of democracy. The 6-3-3 organization fits educational practice more perfectly to the three stages of personal development—the transitional, the formative, and the adolescent periods.

The system includes a junior college, established two and one-half years ago, giving Freshman and Sophomore work of distinctly collegiate grade. While housed in a building with a

high school, the junior college is separate in aim, in methods of instruction, in texts used, in laboratory work, in recitations, and in customs and spirit. The faculty is composed of successful high-school and college instructors holding graduate degrees. Some of its faculty give instruction in both high school and college, but others do exclusively college work. The courses are arranged for students desiring to obtain the baccalaureate degree and for those wishing to enter secretarial, journalistic, or medical courses in other colleges or universities. Students must be graduates of a four-year high-school course, and must take college-admission examinations if they expect to proceed to a degree. Seventy of the best institutions in the country have agreed to admit the students on the same basis as students from other colleges. Fifteen of the seventeen graduates in June entered without conditions Rutgers, Brown, Princeton, the medical college of the University of Maryland, and other institutions of equal rank, and are making satisfactory and creditable records. This extension of opportunity is in a state that has no university supported by public funds and is in the conservative East where the privately endowed colleges and universities question carefully any innovation in the educational field.

The third subsidiary ideal is the *selection of good teachers and the conservation of their freedom and happiness*. The teachers are the most important factors in education because their insight and attainments and character influence the pupils powerfully through the intimate association of the schoolroom.

Newark has made provision for the selection of well-equipped and competent teachers by a system of competitive examinations conducted by a board of examiners composed of the superintendent and six professional associates. This board has the statutory right to license teachers. Its members must possess teachers' licenses or an education equivalent to that required to obtain them. In the past the board has been attacked by persons unable to secure favors for their friends, but the board and the system have survived. The work done in recommending teachers has been very important in making the schools efficient. The high professional standards long established and effectively maintained have given the city a corps of able and successful instructors.

Every large school system is confronted with a problem created by the growth of the city and the enlargement of schools. This sometimes results in "factoryizing" or "mechanizing" the schools and in reducing the idealism of the teacher to a warping, devitalizing realism. Teachers are deprived of initiative and of reasonable freedom by dictated methods of instruction, by irritating and numerous details of administration, and by a deadening formalism in all educational activities. Newark is definitely seeking to maintain a more desirable condition, to encourage the teacher's initiative, and to preserve his freedom in the classroom. Her ideal is that teachers shall co-operate willingly and whole-heartedly with the educational hierarchy and with each other in every way wherein team work is necessary.

The effort is made to secure the happiness of teachers by making the conditions under which they work comfortable and attractive and by providing adequate compensation for acceptable service. For years teachers have had permanent tenure after a probationary period. The teachers belong to a state disability and pension system. They are highly respected in the community, and their social position is as good as they, as individuals, may choose to make it. The salaries, though less than metropolitan salaries, are good. There have been several new schedules adopted in successive years and another will become operative in September next. The minimum salary will be $1,500 in elementary schools, and the maximum $4,400 for heads of departments in high schools. The annual increment is $100 in the lower steps and $200 in the upper steps or in the higher schedules.

During the formative period in the arrangement of the schedules referred to, the superintendent called to confer with him leading teachers of the city in whose judgment and discretion and honor he had confidence. This co-operation was most helpful. The Board of Education finally appointed a salary-schedule committee, composed of representatives of the board and of teachers' organizations, together with the superintendent and other officials to discuss and to formulate salary schedules and to prepare rules for their operation. Some years ago the superintendent developed a system of collegiate and professional training in co-operation with New York University for training teachers in service. To

stimulate teachers to broaden their scholarship and to improve their professional equipment by additional work in colleges or universities, there will become effective in September, 1921, a rule that permits teachers to be advanced one additional step on the schedule every three years provided they present certificates covering collegiate work, or an advanced degree, or research work of approved quality, and have made a record in the classroom of at least *good* during the period for which recognition is sought. Provision has also been made to abolish sex discrimination in salary wherever it may exist in the school system. Further, the superintendent in several cases in previous years recommended to the Board of Education the granting of leaves of absence of one year for postgraduate study, on salary less substitute's pay, to teachers of more than ten years' acceptable service. These precedents caused the board to formulate the policy of granting, under approximately the same conditions, leaves of absence for study and observation to teachers of ten years' service and a year for rest and recreation for twenty years' service. These measures are fair and just and worth while. They make teachers of ability and personal power feel that the profession of education is attractive, for there are rewards as well as opportunities for service and distinction.

The great national ideal of all educational effort is *the making of worthy and loyal American citizens*. For this we have an Americanization program for the adult foreign-born. It covers the maintenance of classes in the evening schools where not only spoken and written English is taught, but where the ideals of American life and character and the responsibilities of American citizenship are stressed. Other day classes of like purpose have been maintained in homes and factories, but their success has been less than those in the evening schools. The public-lecture and moving-picture courses given in schools, playgrounds, social centers, and in congested neighborhoods are additional means of helpful service. It is our intent to expand this work, not merely by providing opportunity, but by "going into the byways" to bring in the reticent and the timid. The menace to America in a large unassimilated population, especially threatening in the

great cosmopolitan centers, must be removed, and the blessings of life, liberty, and the pursuit of happiness in this land of opportunity must be fully appreciated by ourselves and clearly understood by all who dwell among us. Not only do we seek to cultivate love for and loyalty to America among those we have welcomed here, but constant emphasis is placed upon moral values exemplified in the lives and character and achievements of great Americans and of the American people as a nation. The great intellectual leaders and those who, in spite of adversity, have won success in the industrial, commercial, or scientific worlds are respected, but the moral leaders are canonized in the hearts of American youth through the instruction and influence of the schools. The tremendous import of this fact in connection with the influence for righteousness of six hundred thousand teachers actuated by inspiring motives makes the American school an organized agency unparalleled in history for the inculcation of noble personal and national ideals. The call of democracy has not been for efficiency but rather an invitation to climb to the heights. The new call includes both of these. Some must serve in the ranks, others in positions of leadership, and the school system must train and educate all. There must be no blind lanes but rather open roads, broad and level, leading to the coveted goals of life—personal efficiency, worthy character, and thoughtful and loyal American citizenship.

THE OVERCROWDED ELEMENTARY-SCHOOL COURSE OF STUDY

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One of the greatest educational problems of the present generation is that of the overcrowded condition of the elementary-school course of study. This problem has been grappled with very effectively in the past few years by committees of the National Education Association and by others, but much remains to be done. The excuse for the present discussion of the problem lies in the attempt to suggest lines of attack which have had little or no emphasis but which, in the opinion of the writer, are very fundamental.

The key to much of the work which has been done is "elimination." The existing list of elementary-school subjects has been gone over with extreme care in an attempt to retain essentials and to omit non-essentials. In this way an enormous amount of material has been dropped by the schools, time has been gained, and hurry and waste avoided. There is no doubt about the great value of such work. It is the main thesis of this paper that the benefits thus derived would be greatly enhanced if a large amount of reorganization of subjects were to precede and supplement the attempts at elimination. Reorganization affecting the number of school subjects will first be considered.

The matter has been little discussed, yet anyone who will take the trouble to analyze the present situation can come to but one conclusion. *The elementary school is dealing with two or three times the necessary number of subjects.* This will be evident to anyone who will take fifteen or twenty elementary-school courses of study and make a list of all of the subjects which are outlined in any one of them. Such an examination will not fail to produce a list something like that which follows. This list may seem exaggerated, and in a sense it is, for not all of these subjects are taught coincidently.

But each title does represent a course often found scheduled separately; and many of these courses are taught without reference to the fact that they are parts of more complete courses or, perhaps, actual duplicates of work elsewhere provided. (1) Geography, (2) physical geography, (3) elementary science, (4) nature study, (5) school gardening, (6) agriculture, (7) history, (8) civics, (9) current events, (10) primitive life, (11) elementary handwork, (12) manual training, (13) basketry, (14) typing, (15) mechanics, (16) mechanical drawing, (17) printing, (18) cooking, (19) sewing, (20) home decoration, (21) algebra, (22) geometry, (23) arithmetic, (24) number, (25) number-play, (26) physical education, (27) physiology, (28) hygiene, (29) folk dancing, (30) sense training, (31) plays and games, (32) athletics, (33) music, (34) drawing, (35) fine art, (36) picture study, (37) reading, (38) literature, (39) language, (40) composition, (41) grammar, (42) spelling, (43) phonics, (44) handwriting, (45) modern language, (46) ethics.

The causes of such an overwhelming list of titles are at least two: (1) A growing consciousness of the complexity of life, and a desire on the part of makers of courses of study to cover all life-phases. There is frequent discovery of something which has been omitted and which must be added to the list. (2) A failure to recognize the possibilities (*a*) that such omission is only fancied, and that the matter is really taken care of in another connection, or (*b*) that the material omitted may be used as new material in a course already scheduled, or taken care of by a mere change of emphasis within the old course. The modification of existing courses can often make new courses unnecessary.

It is clear that there has been a "hit-or-miss" multiplication of subjects, a looseness of phraseology, and a consequent overcrowding and loss. How should one go about correcting the difficulty? What is a "subject"? This question can best be answered by thinking of a total life-experience which is itself made up of a large number of rather definite type experiences. If the total life-experience were represented by a circle, and the individual experiences by dots within the circle, some of the dots would represent similar experiences and some would represent other kinds. Thus there might be many dots which represented experiences with

quantity—quantitative experience, number experience. The more important and typical of these number experiences, gathered together and organized, become the "subject" of mathematics, of which arithmetic (the school subject) is a part. Also in the total life-experience there would appear numerous dots (experiences) having to do with the relation of man to his environment. These, gathered together and organized, become the subject of geography.

With this conception of a "subject," the most logical thing to do in order to determine the correct number of subjects would be to make a philosophical analysis of life, discriminate the essential types of experience, and allot a subject to each type. It is probable that this will be the ultimate method. But one does not need to await the slow process implied in such a plan. He can take an intermediate step which for the present will serve the purpose almost as well, and at the same time admit of immediate application. He can, as it were, come at the matter from the top downward by dealing in a practical way with the current list of subjects. Fragments may be brought together, duplications pointed out, and a gain looked for in the recognition of relationships. Subjects may thus be kept few and broad, and the various aspects of each (which in many cases have become separate subjects) may be cared for within the broad subject itself.

The effect of such a policy may be made apparent through a discussion of the list of forty-six subjects given above. The first subject on the list is geography. Conceived not as mere location, but as a real causal study of the relation of man to his environment, this subject has established its right to a place in the course. But physical geography should have no separate treatment. The emphasis upon it as an elementary-school subject arose, perhaps, out of the change in the conception of geography from the older locative idea to the newer conception of the relation of man to his environment. This relation first became emphasized as a separate idea in physical geography, but it has been realized that this first physical geography was really the first phase of the new conception of the old subject. Hence with the new teaching of geography the physical geography is included without being scheduled as a separate subject. In so far as there is an elementary-school

subject-matter of physical geography which is not now included in the ordinary geography course, it probably belongs in a general science course. This general science course, whose place is now at least tentatively admitted, would also absorb elementary science, and the science phase of nature study (the appreciation phase being transferred to the course in fine art), along with certain aspects of school gardening and agriculture.[1] Thus out of the first six subjects of the list only two great trunk-line subjects survive. These are geography and general science.

Perhaps the point needs to be raised as to whether geography is not itself a part of general science. It is not, as the subjects are here conceived. Geography is conceived "as the bridge which connects the natural sciences and the human sciences." A fact from the natural sciences (having to do with the environment) is brought into relation to a fact from the human sciences (the life of man), and so becomes a geographical fact. The course designated as general science has the function of providing the natural science facts which, when related to human-life facts, become geographical facts.

Continuing with the list, it is easy to see how history, civics, and current events, properly organized, belong together as one subject. If there is anything in civics which does not belong in history, it is not something which can contend for a place as a separate subject, but something which belongs in a more fundamental course which has to do with all of the next ten subjects on the list—primitive life, elementary handwork, manual training, basketry, typing, mechanics, mechanical drawing, printing, cooking, sewing, and home decoration.

Without entering upon a discussion of the history or principles of manual training instruction, the belief is here expressed that this subject has always been somewhat vaguely conceived as a sort of elementary sociology which is meant to interpret the relation of work (or activity) to life. In spite of the fact that only particular kinds of work have at times been emphasized, and in spite of overemphasis at certain periods upon skill alone, the main trend of the subject has been cultural in the sense mentioned.

[1] For other phases of agriculture and school gardening see industrial arts course.

Certainly today, when manual training courses have everywhere become industrial arts courses directed toward an understanding of the relation of industrial processes to life, the trend toward an emphasis upon the significance of work is clear. Through active participation children come to know and to appreciate the workers in all of those great industries whereby the world maintains itself. If now this attempt at interpretation could be expanded to include not only physical work but mental work as well, then the course under consideration could be focused upon the significance of all work in the life of man. It would then plan to develop right attitudes toward the universal necessity for work, the dignity of work, the joy of work, and the necessary modern division of work. Then children would grow up with the habit of regarding different types of work as mutually helpful instead of mutually antagonistic. The complementary function of labor and capital, for example, would be manifest. They would be habitually looked upon as necessary co-operating agencies instead of as antagonistic forces. Thus this course would become the main Americanization course. It would really be a great mistake to introduce into the already overcrowded course of study a new course to meet the problem of Americanization. All of our people, foreign and native alike, need to be Americanized; but since work is the central thing in life, and since all social problems revolve about attitudes of people toward work, the expanded manual training course could be made to represent America's most serious attempt to use the schools to solve her social problems. Here is a sociology which is elementary enough even for kindergarten children. Not a sociology *preached* as a set of formulated principles, but a sociology *lived* through organized participation in life-situations which ingrain the principles not as memorized precepts, but as habits of thought and action.

The proposal for the course mentioned does not contemplate any complete change in the content of existing courses, especially of existing industrial arts courses. It would only be necessary to expand these courses to include a consideration of agriculture, business, professions, etc., as well as industry. Then, through participation in all types of work activities, the pupil's attitudes

could be formed. In the upper grades, emphasis upon the division of work into men's work and women's work (manual training vs. home economics) would lead naturally to the prevocational and the vocational training which is now receiving so much emphasis. In fact the proposal to focus upon the significance of work already stands out most clearly at the point mentioned.

The conclusion from the foregoing discussion, therefore, is that all manual training and home economics subjects belong together as one great subject which interprets the significance of work to life. Certain material for this course could be handled from the earliest to the latest grades. But because work (activity) has to do with earth facts and life facts, and since these facts are also the background for history, geography, and general science, the course could be made to carry the material of all of these courses up to the fourth grade. From that point the "work" subject could still be continued alongside of history, geography, and general science pursued as separate subjects. This would be in line with the present policy of not scheduling history, geography, and science separately until the fourth grade. It would also be in line with the tendency to keep the child's school life more of a unity in the lower grades and provide for more differentiation in the upper grades. And it would have the added value of providing for the "roots" of the subjects which start in the fourth grade, instead of leaving them "hung up" as if they really sprang into being newly created in the fourth grade without previous foundation. According to this view, primitive life would be represented without its being offered as a separate subject, since the activities of primitive peoples would often be chosen as the center of the "work" course because, as Dewey says, in them life is reduced to its simplest and most understandable aspects.

Subjects 10–20 on the list, therefore, will be conceived as one subject with the title of industrial arts, or human work, or elementary sociology. Its central theme will be co-operation in activity (including leadership, of course, as a part of co-operation), and its method will be participation, not preaching.

Concerning algebra and geometry in the elementary-school course, the common-sense position to take is that in an overcrowded

course there is no place for them as separate subjects. The eighth-grade course might deal with some aspects of generalized quantity including some of the laws of the equation; but it should deal with them primarily as generalized arithmetic, rather than as a definite attempt to teach algebra or geometry as such. If time presses, even the work just suggested might be eliminated in favor of fundamentals in whole numbers and decimal and common fractions, together with some small knowledge of interest and percentage. Moreover, since number and number-play are only other names for a primary arithmetic, it is far better to include all of the subjects from 21 to 25 under the one subject of arithmetic.

The next seven subjects on the list belong to a physical education group. It is certain that if the material implied in the titles from 26 to 32 inclusive were organized into one great trunk-line course which had to do with the welfare of the body both in theory and practice, there would be much more success in the field in question than there is when the elements are treated separately and in an unrelated manner, as at present. The amount of possible elimination would also be much clearer, and the essentials would get the emphasis which they should have.

The thirty-third course, music, has made a firm place for itself and has remained unified so that there is no recombination to be made. Drawing and fine art, however, have such a relationship to each other that they can readily be combined under the title "fine arts." Drawing alone, conceived as mere representation, would not be sufficient. The emotional side of man's nature, the appreciation side, demands its development, and fine art as a study of the appreciation of beauty has been altogether too much neglected. We have been a practical nation, looking to utility without much regard for beauty and without the resource of joy in beauty, which joy goes so far toward making for contentment, and a really sane, normal, and happy life. Drawing, or representation, as a means of recognition and control of beauty is very important as a part of the fine arts course. As mechanical drawing, it is very important as a part of the industrial arts course; but as a separate

course it has no place.[1] Subject 36, picture study, is, of course, only a part of the fine arts course. It will be remembered also that it is suggested that this course absorb the appreciation side of nature study, just as the science course takes over the science aspect of that subject. Then there is no reason for a separate nature study course.

Subjects 37 and 38 (reading and literature) can well be treated as one course. Language and composition are only different names for a single subject, and grammar is an upper-grade aspect of the same course. Spelling, combined with phonics and supplemented by certain word analysis, should become the enriched course, word study. Handwriting and modern language must stand alone, as must ethics also, if it is retained at all. There has always been a controversy as to whether ethics can be successfully taught as a formal subject; and with such strong ethical courses as the human work course, it would seem that the separate ethics course could be omitted.

It seems desirable at this point to introduce a caution against the error of regarding the proposals made above as merely involving a "bracketing" which only disguises the number of subjects and leaves just as many to be taught as ever. The idea is deeper than that. In each case the material of the related subjects is to be reconsidered, reselected, and reorganized into a single compact trunk-line subject with a single and proportionate time allotment. Of the original list of forty-six courses, there remain the following: geography, general science, history, industrial arts (human work), arithmetic, physical education, music, fine art, reading (including literature), composition (including upper-grade grammar), spelling, handwriting, and a modern language. Of this list, all may be continuous throughout the grades, except that in the first three grades geography, general science, history, and industrial arts would be taught together as a composite subject which would

[1] It is desirable to make certain that the industrial arts course, or human work course, should not be confused with the fine arts course. The function of the human work or industrial arts course is that of interpreting the relation of work to life. The function of the fine arts course is the interpretation of beauty in life.

furnish a background for the individual subjects when they were differentiated in the fourth grade.

With such a comparatively short list of subjects, censored for eliminations, and in certain grades, alternated somewhat as to days per week, there could be little complaint of an overcrowded curriculum. Indeed, under such circumstances, there would be opportunity to add courses if experience or life-analysis seemed to call for them. Such a call for one new subject is, in truth, very evident at the present time. With the growing conviction that facts have multiplied until it is foolishness to demand the memorization of all of them, and with the supplementary conviction that therefore much of the work of the schools should be that of teaching children how to study (how to think), there is a growing demand for real school training of this sort. Teaching children *how to study* is a very different thing from *studying with* children. Teachers study with children more or less in all subjects, but the children do not easily catch the method when it is handled in this incidental way.

With the number of subjects determined, reorganization within the subjects themselves becomes the important consideration. Such reorganization should clearly and definitely provide for "cumulative effect." Relationships should be sensed and order of materials arranged so that the work of one grade is built upon the work of the previous grade. Part of this matter of order cares for itself, since the teaching of some things is possible only after certain other things are known. But where a variable order is possible there is usually a best order, depending upon the relationships involved. Teachers could, and often do, deal with division, fractions, percentage, in almost any order; but the order given is the economical one because, when the principles of division are properly taught, they apply in fractions, each fraction being regarded as an indicated division, and the necessary work upon fractions is largely diminished. In the same way, the identical principles apply in percentage and a like economy results, as opposed to the loss arising from the neglect of the existing relationship. This is also true of subjects not so definitely logical as is arithmetic. One could teach about the Civil War before looking

into the manner of life in the South before the war; but time and efficiency would be sacrificed by so doing, because of lack of interpretative material for the war study.

Reorganization should also provide for more careful regard for the stages of mental growth. It is definitely established that there are periods of development, not sharply separated, but gradually and somewhat irregularly shading into one another. These should be taken into account. The stage of delight in fairy stories, for example, should be reflected in the reading and literature; the early love of primitive life should not be disregarded, and memory work and thought work must be correctly balanced and each correctly emphasized in the changing life of the child. These are illustrations only. The psychology of mental development must be fully recognized as a factor conditioning the order of the presentation of all subject-matter.

With regard to the spiral order of arrangement of subject-matter, discrimination should be used. The spiral order must be employed. One cannot learn all about a certain thing at once. The mind gets at first a vague view which must be filled out afterward. But it should be remembered that the filling out of the large idea must come through focalization upon and mastery of smaller ideas. Something must be learned well and added to something else learned well, and the process continued until the larger idea is understood. This means a rejection of the ceaseless nibbling which never definitely seizes upon and fully digests anything. Something must be finished once for all. The vague boundaries may be continually extended, but at the same time the stock of relatively finished work must be definitely increased. To attempt by the mere repetition of vagueness to arrive, finally, at full knowledge is to court failure.

It only remains to repeat, therefore, the argument made at the beginning: In the matter of the overcrowded course of study, dependence should be put not alone upon elimination of material from subjects already scheduled, but also upon a reorganization of subjects which diminishes their number and which takes account of "cumulative effect," stages of mental growth, and correct spiral order.

NEEDED CHANGES IN THE COMMITTEE PROCEDURE OF RECONSTRUCTING THE SOCIAL STUDIES

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The curriculum of American schools has been designed largely by what we may term committee procedure. The developments of the past ten years in scientific education arraign and indict severely the further use of this method. There is evidence for believing that national committees of our leading educational associations can render a great service in the improvement of the school curriculum. There is clear evidence, however, that they have not done so. I personally believe that the widespread adoption of reconstructed courses in public schools can be effectively brought about only by representative committees of national prestige. I have worked in the past, am working now, and hope to work actively in the future on such committees.

But, up to the present time such committees have completely failed to bring about sound, scientific, and relatively permanent reconstruction of the school curriculum. The cause of this is found in the methods they have employed. They are exponents of an armchair philosophy and a method of working in which the opinion and a priori judgment of a small minority of specialists in subject-matter predominate.

An important current example of the use of an ineffective type of committee procedure is the work and report of the Joint Committee on History and Education for Citizenship of the American Historical Association and the National Education Association. Its reports are just now appearing in the *Historical Outlook*. The reports, to my judgment, are typical examples of what will accrue from the use of such methods. The methods employed are thoroughly unscientific, and they neglect all but one of what I conceive to be the true functions and duties of such bodies.

The committee's report is a set of hypothetical programs by individuals.—This report should not be regarded as the carefully

matured recommendation of a great body of historians and educators. In reality the course recommended for each grade is the program of a single worker. The general scheme of the report is Professor Henry Johnson's. He is not a member of the committee. The materials recommended for each of the first six grades are taken from his program. Those for the ninth grade are the work of Professor Shafer and Miss Morehouse. The course recommended for the tenth grade is that which Dr. Knowlton teaches in his classes. The outlines for the eleventh and twelfth grades are not yet supplied. It is important to note, therefore, that we have in this report merely the experience and theories of single individuals, with reference either to the entire scheme or to the content of some particular grade. Furthermore, the writer knows that no one of these schemes has had carefully controlled, measured trial in many schools. I personally believe that we should regard this material, as it appears, as a set of hypothetical programs for the content of the social studies for our various school grades. Some of these programs deserve careful consideration. The course recommended for the elementary-school grades is a result of many years of careful thought, discussion, and teaching by Professor Johnson. I believe we should weigh his suggestions with others and consider them very carefully. But we should not labor under the misconception that these recommendations in this "committee report" represent the mature deliberation and decision of a large body of historians and educators. They do not.

This article is an analysis of "committee procedure."—I wish, therefore, to turn the discussion to a far more significant matter, namely, "What is a sound method by which committees can reconstruct the school curriculum?" I propose, first, to measure the methods and conclusions of this Joint Committee on History and Education for Citizenship against a number of criteria for sound committee procedure; second, to sketch, apropos of several important issues, useful and practicable methods, principles, and illustrative data. The complete filling in of my constructive program will be published shortly.

How can educational committees contribute to the permanent reconstruction of the curriculum?—Any committee of national membership

with the prestige of a great educational association behind it can affect school practice generally by giving widespread publicity to its findings. I believe it can not only change but also improve school practice to the extent to which it makes use of methods like the following.

A PROGRAM FOR A NATIONAL COMMITTEE IN THE SOCIAL STUDIES

A committee should act in three capacities if it wishes to improve school practice generally. First, it should act as a deliberative body of specialists, stating educational aims and criteria; second, it should organize important investigations of social and psychological needs which underlie the curriculum; third, it should act as a national clearing-house and forum for controversial discussion.

A. THE COMMITTEE AS A DELIBERATIVE BODY OF SPECIALISTS STATING AIMS AND CRITERIA

The most important task of the committee is to draw up a scientific program for curriculum-making. This will necessitate frequent and prolonged round-table conferences. The program should include, first, a definite statement of aims and outcomes of instruction; second, criteria for the inclusion of material in the courses, for assigning materials to school grades, and for presenting materials within grades. Such statements can be made only by getting the best composite judgment of trained specialists—a judgment which is the result of mature deliberation and round-table discussions. Two types of specialists should contribute to this discussion: (1) those trained in the study of the validity of materials in history, geography, civics, economics, and other social studies; (2) those trained in the science of curriculum-making and educational psychology. It is inconceivable that a curriculum can be made properly by either group working alone.

B. THE COMMITTEE AS AN ORGANIZER OF INVESTIGATIONS OF SOCIAL AND PSYCHOLOGICAL NEEDS

The program of a national committee, in the second place, should be investigational. Once the fundamental principles are established, detailed studies of human needs and results must be made. Five types of work appear to be important.

1. Determine the exact status of the present teaching of history and related subjects in our public schools. This means an accurate compilation and interpretation of current courses of study from an adequate number of communities—certainly several hundred—selected so as to make a perfectly representative sample of the whole country on such matters as: (*a*) aims, objectives, and specified outcomes of instruction; (*b*) scope of the course which is covered in each grade—nation, period, or region studied; (*c*) time devoted to the subjects of each grade; (*d*) the precise materials used by the pupils—textbooks, reference books, map studies, activities employed, miscellaneous materials; (*e*) by the use of trained specialists, adequately financed, analyze by careful quantitative methods and interpret thoroughly the content of school textbooks and other materials and also class activities, actually in operation in public schools. The purpose of this is to determine precisely the content and arrangement of our present curriculum. We must know definitely what present practice is in order constructively to evaluate it and scientifically to reconstruct it.

2. Evaluate critically and constructively the scientific investigations of curriculum-making in the social studies that have already been published. In like fashion, borrow and make similar use of unpublished curriculum studies in our universities and schools of education. The findings of many such investigations are deposited in the libraries of universities like the University of Iowa, University of Chicago, Teachers College, Leland Stanford Junior University, and others.

3. Make and publish an exhaustive evaluation of representative examples of experimental courses. A score or more of important innovations can always be found among the thousands of schools and school systems. Scrutiny and careful weighing of the purposes, programs, and accomplishments of these new types of courses, some of which are truly experimental, are the most important functions of national committees.

4. Test objectively the results obtained from present instruction in a sampling of typical public schools by the employment of standard measures of attainment. This would reveal to what extent pupils have mastered great relationships, principles, and

"laws"; to what extent they have developed an appreciation of and an acquaintance with contemporary problems; and in how far they have stored up for effective use socially valuable information. It is recognized that, at the present time, measures of attainment in the social studies are far from being well standardized. Hence an important function of such a committee is to further the making of adequate tests of attainment with which to measure the outcomes of instruction.

5. Make scientific investigations of social and psychological needs for the purpose of discovering what should be included in the courses and to what grades different materials should be assigned. Such investigations should be delegated to expert collaborators—specialists trained in educational research. Similarly, the committee should endeavor to stimulate constructive research by others for the discovery of what ought to be taught, and in what grades the material should be given. Studies can be made, for example, which will determine definitely what great principles or generalizations in history, economics, politics, industry, geography, etc., the outstanding leaders of today in each field would include in the curriculum for all pupils to master before they leave school. Studies can be made of the actual historical allusions needed by all people who read newspapers and magazines. Studies are needed to show what are the great contemporary problems and issues which all children should have an appreciation of, and with which they should be acquainted.

C. THE COMMITTEE AS A CLEARING-HOUSE AND A FORUM

It should stimulate controversial discussion by publishing and debating with school people generally its own programs, various other programs of work, different hypotheses concerning the selection and arrangement of subject-matter, theories of teaching, principles of organization, and the like. It should direct this discussion to the consideration of big issues and important questions so that after some years both clear thinking and experimentation will make possible a widespread agreement on fundamental matters. It should get official sanction for, and give widespread publicity to, the findings obtained from the committee's careful investigations, deliberations, and decisions.

D. THE CONTINUING COMMITTEE

As a continuing or standing body, once its recommendations are put into practice, it should study their application in public schools; collect reactions of school people to the proposed program; test results obtained by different organizations of material found by the committees to be socially valuable; finally, report these findings periodically to the school public.

I submit the foregoing sketch as a program for a national committee in the social studies. Should not the program of any national committee in any school subject conform to some such scheme? Up to the present time no educational committee appointed to reorganize a school subject has made use of even a major part of such a program. In another subject, mathematics, the progressive work of the National Committee on Mathematical Requirements is notable. This committee, under the leadership of Dr. J. W. Young and Mr. J. A. Foberg, has employed a technique vastly more scientific than that of earlier bodies.

HOW DOES THE PROCEDURE AND THE COURSE RECOMMENDED BY THE JOINT COMMITTEE ON HISTORY AND EDUCATION FOR CITIZENSHIP MEASURE UP ON THESE CRITERIA?

The committee has failed to fulfil all but one of these functions. Although it has not obtained the official sanction of the American Historical Association, it has given widespread publicity to the findings of the committee. These findings, however, have been based on inadequate evidence, have been derived by unscientific methods, and leave the social-studies situation in practically the same impasse as before the committee was appointed. Let us see precisely what it has and has not done.

A. LACK OF A PROGRAM FOR CURRICULUM-MAKING

The most serious defect is the complete omission of the committee's program for curriculum-making. The committee has recommended specific materials for each of the school grades; yet no criteria are given by which we can measure the validity of the material which they have selected. They do not state specifically why various courses are presented, why particular materials are to be presented in the different grades, or why they are organized as they are within the different grades.

This is precisely the vulnerable point in the entire procedure which historians have employed in making the course of study since the Committee of Ten in 1892. I have recently made an exhaustive study of the procedure of all the national committees in history and in the other social studies beginning with the Committee of Ten. In no one of these reports is there stated definitely a scheme of criteria against which the validity of subject-matter can be checked. They all make recommendations as to the materials to be taught—nation and period to be studied—but no fundamental discussion of the bases of selection and of the placement of materials is given.

This the curriculum-maker today regards as an essential first step, and he feels that committees should be estopped from recommending materials without a complete statement of criteria and organizing principles and before the materials have had a controlled and measured trial in a considerable number of public schools. The student of the curriculum takes the stand that committees of educational associations are doing more harm than good when they recommend courses of study before those courses of study have been thoroughly experimented upon. Furthermore, this does not mean mere trial with a few classes by the authors of this report, so that it is known that given materials can be taught in particular grades and by the recommended methods. Rather, it means controlled and measured experimentation; objective, measured results obtained from a considerable number of schools.

B. HAS THE COMMITTEE CONDUCTED INVESTIGATIONS OR RESORTED TO OPINION?

First, it has not determined exactly the status of the teaching of the social studies in the public schools of this country. The secretary of the committee tells me that letters were sent out in miscellaneous fashion asking for facts concerning what was done in certain communities in the teaching of history. However, school people know no more about the total situation in the country at large than they did when the committee was appointed. And the total situation is chaotic—distressingly so. Before sound advances can be made we must evaluate critically and constructively what we are now doing.

The committee has made no investigation of the detailed content of present courses. Neither has it made use of scientific investigations and analyses of courses of study, both published and unpublished. To two members of the committee the suggestion has been made to use these studies and to make others. No such investigations have been used, and new ones have not been set up by the committee. Apparently the members of the committee have depended completely upon empirical methods and upon their individual and collective judgment as to what is taught as well as to what ought to be taught.

Second, it has ignored published and unpublished investigations of social needs. Although current educational philosophy premises that it is only from objective analysis of human activities, of the actual needs of people, that it is possible to determine what ought to be included in our courses, the committee has not applied the teachings of this philosophy.

Third, much experimentation—much trying of new material in the social sciences—is going on in progressive schools. Apparently the committee has made no use of these experiments. Thoroughgoing, systematic programs of reconstruction, too important to be ignored, are under way in a number of schools and institutions (for example, in the University of Chicago High School, the elementary schools of Winnetka, Illinois, the Horace Mann School, and the Lincoln School of Teachers College). One of the most important functions of such a national committee should be to describe carefully and evaluate important innovations. In some of these, scientific investigations are being made, the methods and conclusions of which will be of far-reaching importance.

Fourth, so far as we can determine, there has been no attempt to test the results obtained from present instruction in typical public schools by standard measures of attainment. Furthermore, the report ignores scattered published material which deals with the use of so-called standard tests in history and geography.

Fifth, a still more important function of the committee would be to make an investigation of its own of what human beings need to know and to be able to do. The committee has recommended a scheme of materials from the first grade to the twelfth inclusive. Various types of historical, civic, industrial, social, and political

matters are definitely recommended to be taught to children without, we must conclude, an investigation having been made of human activities. And this is all the more important when we recognize that an examination of current courses shows that they ignore most of the crucial problems of the day. It is from these current courses that the committee, like its predecessors, starts.

This is curriculum-making by accretion, by reference to opinion, and individual experience. If one uses this method, one assumes that what one has is approximately right and adds to or eliminates from this course of study. What one gets is a compromise—necessarily so because it has to be acceptable to the protagonists of things as they now are. That is exactly the difficulty. Our committees have been almost completely made up of protagonists of the current educational order. Representatives of vested intellectual interests are appointed to reorganize the very foundation of those interests. Naturally, the result is not reconstruction but mere rearrangement. By this method we take English history out of one pigeonhole and put it into another. We eliminate ancient history from the ninth grade and then weave it into the seventh and eighth grades. It is the thesis of this article that progress is impossible by these methods. Progress in curriculum-making will come only by making a clean sweep of what we now have in the curriculum, ignoring the material in the present course (including later only those parts that conform to our criteria), and building a whole new program on a scientific basis of principles of selection, grade placement, and arrangement.

C. HAS THE WORK OF THE COMMITTEE LED TO A REAL EXCHANGE OF VIEWS?

The committee has published its own program and presented it frequently on educational platforms. Almost never has this resulted in any real debate—exchange of views, modification of the recommendations of the committee. Other proposed programs have not been discussed. Thus, the committee has given widespread publicity to its findings. It has not, however, succeeded in obtaining real criticism from school people and in making thorough use of it.

The committee has been discharged and so can perform no function as a continuing or standing body. In its place is a new

standing committee of the American Historical Association. We should plead vigorously with this committee not to make any recommendations concerning needed changes in the social-science curriculum in the near future. In the present state of our ignorance concerning what ought to be taught and where we should teach it, our most important lead is to experiment and debate different programs.

ILLUSTRATION OF A SCIENTIFIC PROGRAM FOR CURRICULUM-MAKING

A. HOW SHALL THE CONTENT OF THE COURSE BE DETERMINED?

Let me illustrate what I mean by a scientific program for curriculum-making in the social studies. I mean, first, that the committee should draw up a definite statement of criteria against which each unit of subject-matter to be included in the course shall be checked. My own procedure would be to ignore the fact that we have today a curriculum in history, geography, and civics; start afresh and define clearly the scope, functions, and objectives of the course by the criterion of "social worth." This criterion necessitates that, to be included in the course, the material must contribute (1) to a grasp of the great economic, social, and political relationships or "laws"; (2) to an understanding of established modes of living; and (3) to an interest in and an appreciation of the outstanding "problems" and issues of contemporary civilization. If this is done, a considerable body of material will be included that now forms part of our social-studies curriculum; we will include very much that is not now in the course, and we will eliminate fully one-half of the administrative and political content in current courses.

Investigation and experimentation are needed rather than empirical and theoretical programs.—To illustrate and substantiate these statements, I shall publish during the next year some half-dozen studies made during the past year and a half. These studies consist of the following types of research:

1. Careful—quantitative as well as qualitative—analyses of nationally used histories, geographies, and civics books.

2. An investigation is being made of the units of material which outstanding thinkers in economics, politics, social reform, and industry would include in the curriculum required of all boys and girls

through the ninth grade. Prolonged personal interviews and detailed reactions of the most prominent men in various branches of work will enable us to construct a curriculum based upon the very best knowledge and judgment that it is possible to secure.

3. Another division of our research group is making an elaborate statistical analysis of the allusions found in representative newspapers and magazines.

4. Likewise, a study is being made of the extent to which our existing curriculum in history, geography, and civics deals with vitally important problems of contemporary life, with crucial economic, social, and political "laws" and relationships, and with established modes of living. Up to the present time no committee has ever stated definitely these great "laws" or these fundamental contemporary problems, or these basic and established modes of living which alone, it appears to us, can act as the guiding criteria which control the selection of subject-matter for the social-science field.

The result has been that existent curriculums largely fail to deal with problems, vital either to contemporary society or to the growth of our national life. This is a conclusion reached from the careful canvass of the four newest and most frequently used grammar-grade United States histories. Each page of these books was scrutinized to determine the extent to which each of the following types of problems was treated. The aim was to find out whether children could be expected to understand and develop an appreciation of problems of present interest. The problems listed are largely economic and industrial, but the same conclusion follows concerning the treatment of social and political matters.

1. Crucial matters of land; the history and critique of land policies; the importance of land questions in helping to explain the development of farm tenancy and the like.

2. Problems of the "market" and its historical development; railroad rates and rebates; public vs. private ownership, operation, and control of railroads, terminal facilities, grain elevators, and the like.

3. The control and operation of "credit" facilities.

4. The history of labor problems; movements for the increase of co-operation between capital and labor; problems of wages, hours, living conditions.

5. The operation and control of "key" industries.

6. The development of centralization and concentration in industry and business.

7. How our distributing agencies grew—railroads, merchant marine, public utilities, agencies for communication, etc.

8. The cost of living—historical and current.

9. How the press developed its influence at various times in our growth.

10. The story of "how America developed agencies" for the formation of public opinion.

11. The history of experiments in government so organized as to give a critique of the relative fitness of various forms of government with which society has experimented to secure adequate expression of either popular opinion or most intelligent opinion.

The investigation supplies data[1] for the conclusion that commonly used textbooks in history provide such a meager treatment of these crucial problems (many of them ignored altogether) that a grasp of these vital economic and industrial matters and of their historical backgrounds is totally impossible.

5. The limited space of this article will permit me merely to mention another source to which our own research group is turning in its endeavor to construct a sound curriculum: the writings (checked by many personal interviews) of the leading "frontier" thinkers of the day. From some seventy outstanding books in politics, industry, economics, anthropology, sociology, and the like—many published since the armistice—statements are being made of the criteria just named. These in turn are enabling us to put together a course of study that we believe will stand the most rigorous tests of social value. It is our thesis that the existing curriculum and, in a large part, the one proposed by the joint committee will not pass such tests of social validity. Certainly the committee should state its program for curriculum-making—that is, the basic principles of selection and organization of material—in order that school people may critically test it.

By this illustration I have tried to show how a scientific program for curriculum-making makes use of the criterion of social worth. The crux of the matter is that we need investigation, not opinion. Only by an objective analysis of human activities can we determine what ought to be included in the curriculum.

[1] These data will be published in an article shortly.

B. HOW SHALL MATERIAL BE GRADED AND ORGANIZED?

So much for the content of the curriculum. What about the organization, grade placement of materials, and arrangement within the grades? The new Committee of Eight gives no such criteria for these important matters. Yet materials are assigned to grades and illustrations are given of methods of presenting material which appear to me to be at variance with sound psychology.

A distinct issue: On what principles shall material be graded and arranged?—It is astonishing to find that those who have made curricula in the social studies have made almost no use of the psychological knowledge which has been accumulated in the past thirty years and which deals with the learning of great principles, the comprehension of relationships and "laws," and the acquiring of information. Aside from the development of important attitudes, probably the most essential outcome to be looked for from the study of history and related subjects is the clear grasp of great economic, social, and political "laws," movements, and causal relations. Subordinate to this, and certainly contributing to it, is a thorough grasp of socially worth-while information—the acquiring of knowledge, facts, and ideas. It is one of the chief defects of our historical, geographical, and civic instruction that the course has consisted largely of the encyclopedic presentation of facts, with little or no emphasis upon the application of those facts to the understanding of great fundamental relationships. We have preached the latter, but a thorough analysis of our practice shows that it has completely failed to keep pace with the theory. In history, geography, and civics, schools have traditionally presented social and descriptive material by the methodical, intensive, analytical study of topics, events, regions, continents, and systems.

We must provide for practice in generalization.—One of the chief hypotheses underlying my own curriculum research in the social studies is that in order for children to be able to generalize in handling social situations they must have constant practice in generalization. In order for them to understand great movements, they must be faced constantly with such movements and practice continually in interpreting them. In order for them to understand causal connections, they must deal with them each

day of their school career. In our own experimentation, we present big, broad movements, relations, causal connections in constantly recurring but varied situations in the attempt to develop a rich, interpretative background. We believe that information and grasp of principles should be acquired in this way, that is, by gradual accretion, by the accumulative recurrence of primary facts in greatly varied situations. In our work, therefore, we deliberately present great relationships in the class discussion day after day, believing that for them to be permanently mastered, a pupil must see them illustrated in many diversified settings. Thus, frequent repetition of causes, big movements, and relations is imperative to bring about real mastery. Repetition to be effective must involve the making of many interconnections—not mere drill upon isolated topics, events, conditions, personages, etc.

To provide adequately for thinking and practice in thought we believe it is necessary to do two things which our present textbooks and recommendations of committees do not do: first, definitely organize our courses around problems, relations, causes, and effects, in brief, around the great "laws"; second, make these relationships recur in many school grades and so frequently within a school grade that mastery steadily grows, both of "laws" and of the information contributory to them. How far this principle of organization will carry us only the experimentation of the next few years will show. Whether it will be necessary to repeat these "laws" and causal connections in each grade—that is, whether we must adopt some form of "layer" scheme of organization—remains to be seen.

But the important point is this: repetition of "laws" and facts must be provided for, and this is in distinct opposition to the present practice of organizing the history curriculum. In current practice chronological sequence opposes "problem" or unitary organization. Fact-giving predominates over problem-solving as an organizing principle. Arranging history by "periods" and "years" holds forth over scientifically determined repetition of fundamentals. Encyclopedism and paragraph treatment in text-making render impossible the grasp and retention of vital principles of

human relationship which depend for mastery on wealth of detail and human interest and on adequate repetition. Practice in thought is necessary to develop power of thought.

NEED FOR A NEW TYPE OF NATIONAL COMMITTEE WITH A SCIENTIFIC PROGRAM

What can a committee confidently recommend, then, with respect to these intricate problems of grade placement and organization of subject-matter?—My answer is: Nothing, at the present time. The only sound course a committee can take now is to initiate careful experimentation upon several proposed schemes of organization. Indeed, it seems that the most intelligent conclusion that we can draw at the present time is that no one scheme of organization can be proved to be the best. Certainly no one scheme available today has been proved to be so. However, the psychological experimentation of the past thirty years has contributed certain fundamental laws of learning which certainly can be recognized, and to which one should conform. The most promising lead, it appears, would be to draw up hypotheses concerning methods of organizing and presenting material which are based upon known laws of learning and set up detailed and carefully controlled and measured experiments to determine their validity.

In the meantime, let us get under way an important movement for scientifically determining the content and arrangement of the social-studies curriculum. Furthermore, let us begin now to look forward to a time, three to five years hence, when we may have the appointment of a different type of committee, a national committee which will set up a procedure on the order of that discussed at the beginning of this article and which will be adequately financed and permitted to employ two or more high-grade secretaries who are active professional workers in the field. In the meantime, let us refuse a hearing to any group of workers appointed by a national association which brings forward recommendations concerning what materials should be taught or in what grades and by what methods, unless that group presents a complete, scientifically founded program and thoroughgoing evidence to support its recommendations.

THE INTELLIGENCE TEST AND THE TEACHER

OTTO W. HAISLEY
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Standardized tests and measurements have become household words with the teaching profession. We no longer test alone for adenoids, defective vision, and poor hearing; we now are giving an equal amount of attention to mental curvatures and bad brain postures. When the child enters school he is given a psychological as well as a medical and physical examination. A record of these findings is placed in the school files, which, together with other kindred information gathered from time to time, is available for the child's teacher who uses it to further his educational progress. She may even be able to predict with reasonable accuracy the limitations of his mental capabilities. On the strength of this fact, new administrative devices are being developed and new methods of instruction and new curriculums are being worked out in hundreds of progressive school systems in the effort to give each child the sort of training which his needs demand.

There is, however, another use of the standardized test the possibilities of which are not so generally recognized.

By far the most important work of any superintendent of schools consists in selecting his teachers. As the matter now stands, we select our doctors, our lawyers, our dentists, and our factory bosses with greater care and with less danger from the incompetent than we select our school teachers. Any device, therefore, which will enable us to scrutinize our teaching timber more thoroughly and which will enable us to select our teachers with greater certainty of success must of necessity gain popular approval. Moreover, in a well-democratized school system, the teacher will be called upon for more than merely classroom instruction. She should assume her share of responsibility in formulating educational policies and making courses of study. This interpretation of the work of the teacher makes it essential that the supervisor get a true estimate

of the capabilities of newly appointed teachers, in order that they may be used to the best advantage in working out the problems which confront the school system.

To ask a group of teachers to submit to an intelligence test is not an entirely new thing, yet it is novel enough to make the average city teacher question the right of a superintendent to do so. The suggestion that such a device might be used as a means of determining the relationship between the teacher's mental capacity and her efficiency in the classroom was the outgrowth of an experiment with one hundred pupils in the seventh grade who had been divided into four sections on the basis of the results of an intelligence test given when the work of the sixth grade was completed. The work in the seventh grade showed that the teacher could call upon the brightest section for more than three times the work accomplished by the slowest section. Six months after the intelligence test was given, a standardized reading test was given to these sections to test their ability to read rapidly and to comprehend what they read. The brightest section was found to be more than three years in advance of the standard for pupils of their chronological age. This section as VII B's (lower half) made a higher score than a rather unusually bright class of VIII A's (upper half).

The teachers of this school system were rated by the superintendent and supervisors and placed in three classes, A, B, and C, according to their general efficiency. On the basis of these judgments, 28 per cent of the teachers were placed in Group A, 52 per cent in Group B, and 20 per cent in Group C.

An intelligence test was given with which the teachers, with two or three exceptions, were unfamiliar. Most of the teachers had never taken an intelligence test. After the test was given the papers were scored, arranged in sequence from highest to lowest, and divided into quarters. It is interesting to note how the three classes were distributed among these four groups.

Starting with the lowest class, C, we found that 67 per cent of these were in the first (lowest) quarter, with 11 per cent in each of the other quarters. Of Class B, 12 per cent were in the first quarter, 27 per cent in the second, 34 per cent in the third, and 27 per cent in the fourth. Of Class A, 21 per cent were in the first quarter,

29 per cent in the second, 21 per cent in the third, and 29 per cent in the fourth. This is shown graphically in Figure 1.

Certain interesting facts may be noted in connection with these ratings. All of the teachers rated as A whose scores on the intelligence test place them in the first quarter are grade teachers. Two of these are teachers with a number of years of experience. All are very professional in their attitude and do a great deal of professional reading. They take correspondence courses, attend

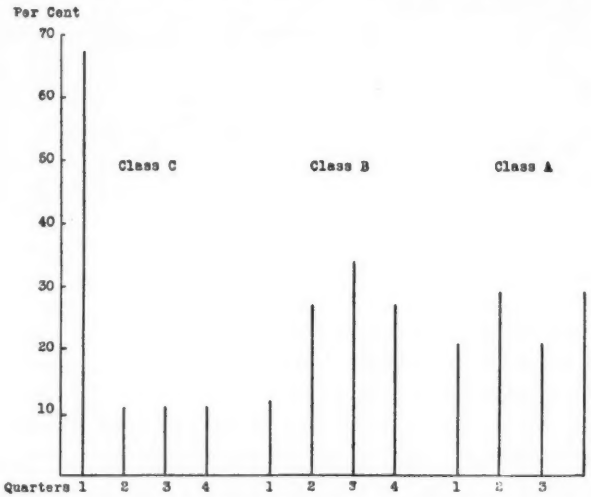

FIG. 1.—Distribution of the A, B, and C groups of teachers on the basis of intelligence.

summer schools, and have more than a casual interest in their work. One of them, at the time she took the test, was laboring under an unusual nervous strain. This probably accounted for her low rating. Another one, while always in absolute control of the situation in her own classroom, is easily upset by a new situation. This characteristic probably affected her score. In these cases, at least, it is doubtful whether the scores made on the test given are true gauges of their mental capacity.

Miss X, ranked as C, made a score which placed her in the fourth quarter. This teacher has had little experience, but shows

flashes of real ability. It is not probable that she will remain in Class C if she continues in the profession.

The high-school teachers had a median score more than 12 per cent higher than the grade teachers. That they constitute a more highly selected group must be admitted. There immediately arises the question, however, Did additional training account for any of this? The highest score was made by a junior high school teacher who is a college graduate. The second highest score was made by a grade teacher.

Granting that we have been accurate in our attempts to measure these teachers, a study of the figure discloses the fact that two-thirds of those belonging in Class C according to the judgment of the supervisors are to be found among the lowest one-fourth when grouped on the basis of intelligence. It further shows that of Class B a smaller number is to be found in the first than in any other quarter. It also appears that, so far as this particular school system is concerned, the possession of poor mental capabilities is apt to handicap the teacher, thereby impairing the efficiency of the system. Above the lowest quarter, however, there seems to be no definite relation between native ability as shown by this test and efficiency in this school system. The inference, therefore, from this limited survey is that the possessor of a fair intellect has as good a chance to become an efficient teacher as the possessor of a brilliant intellect. In short, attitudes, experience, training, and personal characteristics become the deciding factors.

Another point to be noted is that there is a greater degree of alertness manifested by our teachers as a result of this test. In general, the teacher who by her grade rated above the average has put forth a greater effort to prove that this rating is not a fictitious one. On the other hand, the teacher who rated below the average has put forth a greater effort to prove that the rating is not correct.

The result of the test, in so far as it has affected instruction, has also been beneficial. In certain cases it has reinforced the supervisors' judgment of the value of the teacher's service to the system. In other cases it has pointed out possible weaknesses which have been more or less unrecognized. In any event, it has

given to the supervisors the clear impression that there are significant mental inequalities in our teaching force. As it is true with pupils, so it is with teachers, they cannot be handled in the most efficient way unless these individual differences are reckoned with.

Our group of teachers is representative. We require two years of normal training for grade teachers and four years of college training for the high-school teachers. Practically all are teachers with experience. We have a high minimum and average salary, which enables us to select our teachers with considerable care. The fact remains, however, that our teachers are not all possessed of like mentality, nor are they of uniform value to this school system. Our experience, which we believe will be proved to be the common experience, indicates that in general better results would follow if there were a mental capability minimum established for all teachers.

Educational Writings

REVIEWS AND BOOK NOTES

Co-operative study of silent reading.—The numerous investigations which have recently been made in the field of reading furnish an excellent example of that type of a scientific study of education which must eventually extend to every subject in the curriculum. The gathering together of the results of carefully organized experiments furnishes the only sure basis for the formulation of methods of treatment in the schools. The fact that such experimental studies are painfully tedious and time-consuming is overbalanced by the value of results scientifically obtained. A recent addition[1] to the experimental literature of reading comes from John A. O'Brien, who, with the assistance of the Bureau of Educational Research of the University of Illinois, has made a study focused mainly upon the problem of the rate of silent reading.

The book includes two principal types of material. The first of these consists of a rather extended review and criticism of previous investigations of reading. Readers who are not familiar with the work already done will find this summary a very helpful guide to the study of the literature. The second type of material, which is the main concern of the book, is a report of the methods and results of the experimental study made.

The general problem of the investigation is the study of the factors affecting the development of speed in silent reading. The experiment contemplated three methods of attack. The first consisted of a training experiment emphasizing speed of reading. Forty grades in twenty schools located in nine Illinois cities furnished the subjects for investigation. These subjects were distributed over all grades from the third to the eighth inclusive. The period of training covered thirty-nine days, three of which were taken up with testing with the Courtis Silent Reading Tests. Each of the classes used a thirty-minute period daily which was broken up into periods of three or four minutes of silent-reading practice where the chief emphasis was speed. Between intervals of reading, comprehension was tested either orally or by writing. The classes were divided into experimental and control groups of approximately equal ability. The method of individual pairing of subjects in the two groups added an element of control which proved valuable. Each pupil kept an

[1] JOHN ANTHONY O'BRIEN, *Silent Reading*. New York: Macmillan Co., 1921. Pp. xvii+289.

individual chart showing progress in speed from day to day. Special attention was given to the instruction and training of the co-operating teachers.

The second type of training was organized similarly to the first, the difference being that its principal objective was the elimination or decrease of vocalization. The third method of attack contemplated the use of specially constructed tachistoscopic apparatus for the development of the perceptual span. This part of the experiment was finally abandoned, due to inability to secure the proper apparatus. Some information regarding perceptual development was obtained through photographing the eye-movements of a number of subjects before and after the training period.

The results of the investigation, in brief, show an improvement in speed by the experimental group of 56 per cent as against 25 per cent by the control group, making an average superiority of 31 per cent for the experimental pupils. In comparison, the experimental group gained 0.6 per cent over the other as measured by the Courtis index. When measured by the number of questions answered correctly, the gain of the experimental group was larger, amounting to 29 per cent.

The eye-movement records show that the improvement is effected physiologically chiefly by a lessening of the number of fixations rather than by a shortening of the average duration of the fixations. The improvement is also accompanied by a decrease in the number of regressive movements and by the "setting up" of habits of regular rhythmical eye-movements [p. 272].

The experiment undoubtedly shows that pupils can read much more rapidly than they normally do. This much might be said of practically any mental process. It is the common effect of practice. The question which the reader would like to see answered is whether this gain in speed was permanent, or whether, after the incentive of the experiment was past, the pupils dropped back to the level of those who were in the control group. The value of such an experiment would lie in the permanent, rather than the immediate, improvement.

The final conclusion of the study, that "the development of speed in silent reading is, in reality, reducible to the *more effective utilization of the perceptual span in reading*" (p. 273), is worthy of careful consideration in the formulation of methods of teaching reading.

Organization and curricula.—The British people have consistently refrained from reducing their schools to a state-controlled, uniform system. Individual opinion, tradition, or desire for reform may move head masters to adopt such plans of organization and curricula as they may wish. Parents thus have a wide choice from which to select an institution for the training of their children. Of recent years, however, there has been developing on the part of the state a greater concern to exercise a wider measure of supervision. There is found, then (and evidently because the people want it so), a much greater diversity of both organization and curricula than exists, for example, in the

schools of the United States. Over these schools the state exercises its supervisory powers on the basis of monetary grants given to such schools as meet certain requirements for the education of a particular group of children.

Mr. Sleight, an English educator, describes in his recent book[1] the elementary and secondary schools of his country with particular reference to the principles of their organization and curricula. Only so much of recent educational history is included as serves to emphasize some of the conspicuous efforts at reform and progress. It was written, admittedly, before the passage of the Act of 1918 and suffers therefore from incompleteness in that respect. The last chapter, evidently an addendum, is included to make good the lack, since it discusses the Act in a brief manner.

Major emphasis is placed upon the philosophical basis for curriculum-making. This involves a discussion of aims and means of education. Beginning with the doctrine of formal discipline, it carries the reader through to the modern conception of social efficiency, free use being made of the views of Spencer, James, and Dewey.

Having founded education on individual and social needs, mutually interactive, the author centers attention on the curriculum as the means of realizing them. The author holds that diversity is desirable. He opposes "standardized" (meaning prescribed) curricula, but admits that a minimum should be set up, outside and around which the teacher's initiative may play, just as, in civil life, there are set up certain minimal standards of moral behavior. In this plea for diversity he admits, however, that there are fundamental needs common to all, and that, in varying conditions, it becomes then a matter not so much of the choice of material as a choice of method. The boy in the city and the boy in the country have similar basal needs, but conditions make necessary a different method of instruction.

Many typical examples of elementary- and secondary-school curricula are given in such a manner as to present the complete daily and, in some cases, weekly programs. Because of differences in organization it is difficult to make comparisons between them and the curricula of our own schools. Particularly is this true when the content of the courses is not known.

Chapters on "Elements of Organization" and "School Government" discuss various principles on which the internal organization of the school may be based. The functions of the head master or the head teacher, promotion, classification according to ability, formation of "remove" classes (similar to American special classes), and pupil self-government of various types are sketched in sufficient completeness to be suggestive and helpful to the student of education.

A chapter on "Other Systems and Types of Schools" presents in barest outlines the school systems of Scotland, the United States, Germany, and France.

[1] W. G. SLEIGHT, *The Organisation and Curricula of Schools*. New York: Longmans, Green & Co., 1920. Pp. v+264.

The book is interestingly written and for the American teacher serves to present a picture of the English schools as well as to point out definite movements of thought and organization as related to them.

Introduction to psychology for teachers.—The problem of introducing students to the study of education has generally been met in one of four ways. These four methods of approach may be designated as historical, sociological, instructional, and psychological. Where the psychological approach has been used there has existed a rather general feeling that the material presented in the ordinary college text is too difficult for beginning normal-school students, and also that a large amount of material is contained which is valuable for a college course, but is not adapted to the particular needs of the initial approach to education. In order to meet such a need Professor Averill has written a textbook[1] in psychology in which both the selection of material and the style of treatment are adapted to normal-school needs.

Regarding the need which has dictated the form of the book Dr. Averill says:

> It is my frank opinion, checked up by that of a goodly number of my colleagues in normal-school work, that there are very few textbooks indeed at the present time which meet the needs of training-school classes in psychology. In a very special sense normal-school psychology must be highly practical, highly workable, and highly understandable. There is no time in our two-year courses for laboratory experimentation, much as we ought to have it, nor for going into theoretical or controversial territory. What we need and must have is psychology stripped naked of all needless technicalities, disentwined from all irrelevant supposition and theorizing, and articulated as closely as possible with the schoolroom situation. There is no time for incursion into any of the enticing psychological byways, fascinating and suggestive as such inquiry might be. Rather, the psychology of the training school must fashion and temper a practical tool for the hands of the teacher-craftsman. . . . .
>
> Unfortunately, however, it has been true until somewhat recently that the training school has been dependent for its textbooks in psychology upon the college (or university), with the result that the study of psychology in the former institution has been not infrequently of very doubtful value. Normal-school students have occasionally been more conversant with theories of color-blindness, or with theories of emotion, or with absolute and differential limens of sensitivity, or with color zones of the retina, than they have with the fundamental instincts of childhood, or with heredity and euthenics, or with genesis and growth of the higher thought processes of children [pp. x–xi].

The book differs radically from the general introductory text in psychology in the selection and organization of material. This is its principal contribution. After a brief introductory discussion of the nature of psychology and the behavioristic point of view, the author introduces the student to the operations of the nervous system and the lower forms of behavior. He does this to provide a basis for the following elaborate discussion of the instinctive

[1] LAWRENCE AUGUSTUS AVERILL, *Psychology for Normal Schools.* Boston: Houghton Mifflin Co., 1921. Pp. xx+362. $2.25.

and emotional behavior of children, to which he devotes about a third of the book. This material, together with a series of lessons on heredity, makes up the first section of the volume. The second discussion treats such general topics as habit, sensation, perception, attention, imagery, memory, etc., in a briefer manner than is the custom in most texts. The emphasis here is upon the mental processes involved in learned behavior. The last division of the book discusses subnormal and gifted children, individual differences, adolescence, and the evolution of the social attitude toward children.

The book is not well adapted to the needs of the general college course in psychology. This is not its purpose. However, for beginning courses in normal-school psychology or junior-college classes in schools of education the book is undoubtedly of much more value than the texts which have been generally used. It frankly recognizes the particular needs of such classes and independently sets about to satisfy those needs. This independent development of material for teacher-training courses is a practice which deserves encouragement.

Psychology for teachers of morals and religion.—The chaotic moral conditions resulting from the war have given rise to many schemes for reform. Many religious agencies throughout the country are assigning to themselves the task of moral reconstruction. Be it said in their favor, for the most part they are looking to the social sciences for suggestions concerning methods of procedure. A new volume on adolescent psychology[1] will be of interest to those responsible for the varied phases of religious and moral training. Dr. Tracy's book is one of the first in a series of ten volumes to be known as "Handbooks of Moral and Religious Education." The series will be edited by Dr. E. Hershey Sneath, professor of religion and religious education, Yale University.

The author announces his purpose in the Preface as follows:

> The purpose of the present work is not primarily to add to the number of those valuable records which embody the results of investigations into the adolescent mind from this or that point of view; but rather to survey the whole field, having in mind the leading facts, as presented in these psychological and biological researches, as well as the fundamental categories of valuation, as set forth in the philosophy of morals, of religion, and of education; and to place the results of this survey in the hands of the teacher, within the modest compass of a "handbook" [p. ix].

One would infer from the title of the series of which this book is a part, and from this statement of purpose, that the matter to be presented would be designed for the average Sunday-school teacher and religious worker, most of whom are not likely to be particularly well versed in either the history of philosophy or the philosophy of religion. The reader of Dr. Tracy's volume will find it necessary to recall his philosophy frequently. In fact, the use of the book as a practical aid to the non-professional religious worker is greatly

[1] FREDERICK TRACY, *The Psychology of Adolescence.* New York: Macmillan Co., 1920. Pp. x+246.

limited by its phraseology and by its numerous references to the philosophers from Socrates to James.

However, there is much to be said in its favor. The chapters on instinct, emotion, intellect, and will are well founded and suggestive. The chapter entitled "Self-Consciousness and the Social Order" is very well developed on the philosophical side. Some will regret that physiology does not find a wider use in the treatment of the problems of sex. In view of the present wide interest in the Freudian theory we would have welcomed some reference to the real or apparent relation of sex to conduct.

Dr. Tracy's handling of the religious phases of adolescence will be applauded by many as sanely "liberal." His attitude is reflected in the following:

> What I want to insist upon is, that religion is a matter of thinking and feeling and acting; and, therefore, religion of some sort and degree is possible to every being capable of thinking, feeling, and acting, and capable of ideas, even though they be ever so rudimentary, about God and His relation to men [p. 186].

The final chapter, "The Pedagogy of Adolescence," is, as the author says, "intended as a logical deduction, or series of deductions, from the chapters that have preceded it." He pleads for "more meat and less milk" in the intellectual diet of adolescents. In his opinion children should be taught to think in the abstract. A closer contact with nature will do much to stabilize and enrich the moral and religious impulses of youth. He justly emphasizes the immeasurable influence of the personality of the teacher upon the adolescent pupil.

The author is not unaware of the theory of recapitulation and the doctrine of culture epochs, but he feels that a controversy would be out of place in his present treatment of the subject. "The purpose is mainly to intimate that for busy teachers there is another field whose cultivation, for the present at least, is likely to yield quicker and more valuable returns" (p. 23).

On the whole, the book is decidedly worth while, and will serve well those to whom it is addressed.

Australian view of American education.—An objective, impartial discussion from the outside is always clarifying to one who has habitually held only an inside view. Such a discussion[1] of American higher education, and to some extent our whole school system, has recently been written by Professor Holme of the University of Sydney, Australia. The occasion of the book is a report, made to the University of Sydney, of a preliminary survey of American universities.

The discussion ranges from broader topics of general administration, federal aid, and state support to the details of matriculation requirements, graduate work, and the problem of student dormitories. Professor Holme

[1] E. R. HOLME, *The American University*. Sydney, Australia: Angus and Robertson, Ltd., 1920. Pp. 242.

takes the view that American universities are attempting to bear too large a part of the burden of education, and that they would do well to confine their efforts more closely to the carrying on of advanced work. He says:

> The high school does not carry the general education of the citizen sufficiently far. He wants more, and he goes to college for it. His tastes and needs may easily demand more than four years of secondary schooling can give him. The college, then, is forced to occupy itself with a good deal of secondary work. It constitutes whole classes for students who, except in point of age, should be at school for the work they are doing. It teaches them at enormous expense. They also impose upon it enormous burdens of administration. In particular, class-records of a school-like character have to be kept; and the teachers must be responsible for each pupil's progress and for his stimulation and correction, greatly after the methods used in schools [pp. 25–26].

In the administrative control of our higher institutions the author sees the reflection of American business organization. After a description of the staff of executives required by a large university he says:

> Perhaps there is too much administrative machinery in America. Certainly some of it appears over-valued. To pay a professional dean more than a professor is to weaken the vital principle that teaching and the increase of knowledge are what a university exists for. To tempt good scholars out of professorships into administrative work, by means of apparently higher positions and actually higher salary, is surely bad policy. American academic critics are right when they claim that all deans should be elected by the teaching staff, and not merely appointed on nomination of the president, as is now the case [p. 45].

Professor Holme further adds:

> I am quite satisfied that the American presidency ought not to be imported into any Australian university, however unsatisfactory the system now in operation [p. 46].

The concluding chapter discusses some of the precedents which would be of value for Australia to adopt. Among these are listed the dormitory, federal aid, some aspects of administration, graduate schools, and financial self-help.

The book will prove stimulating to any graduate of an American university. Its discussion of the relationship of the university to the lower schools will be of interest to public-school administrators.

The project as a basis of the elementary-school curriculum.—Progress in the science of education is largely dependent upon experimental work in the classroom. Laboratory theories must be put to the test of the real situation in the school and the results carefully evaluated before one can draw conclusions. Hence, accounts of experimental teaching will always be valuable. A new book[1] has recently been added to Lippincott's "School Project Series" dealing exclusively with a description of experimental teaching by the project method, which develops one of the many interpretations of the project.

[1] MARGARET ELIZABETH WELLS, *A Project Curriculum.* Philadelphia: J. B. Lippincott Co., 1921. Pp. ix+338.

The book tells how a major project was selected, for each grade of the elementary school, large enough to provide a basis for most of the work of that grade throughout the entire year. Minor projects arising within each major project provided the immediate daily activities in the respective grades. By following such a plan of organization the author gives in detail the full work as actually taught in the first three grades, which is indicative of tentative outlines of work for the fourth, fifth, and sixth grades. In order to check up the outcomes of the work as developed, the subject-matter of each project is given in terms of the subject-matter as usually organized under the conventional curriculum. "Measured by this form of checking, there seems to be quite as much of arithmetic, geography, reading, writing, and other regular subjects covered as under the regular organization" (p. vii).

The volume is divided into four sections. Sections 1 and 4 deal with the curriculum itself and the outcomes of the curriculum, while sections 2 and 3 discuss the theses underlying the project curriculum and the guiding principles in curriculum-making. The eight theses underlying this project curriculum are each evaluated and defended in terms of carefully selected references from the most progressive educational literature of today. "These principles lay stress upon the more significant psychological and social aspects of education, and endeavor to combine them by consistent unification in applications that are practicable" (p. viii). The play activity in children is given a large amount of emphasis. A medium ground between formalism and freedom is attempted, while the social and psychological approaches are harmonized in part.

The Appendix contains specimens of the work done by the children and completes the data which a teacher would need in attempting to repeat the experiment. The conditions under which the experiment was carried on were far from ideal, and the results were not checked in terms of modern scientific measurement. However, this book should help to direct interest to the needs and possibilities of socializing the formal organization of the school subjects. Miss Wells's experiment should be repeated, and elementary-school teachers will find in her work a point of departure which should be carefully considered before a similar project is undertaken.

Hawaiian education.—The American public-school system, transplanted to the islands of Hawaii, has for some years been working out its salvation under peculiarly difficult circumstances. It would be expected that problems would arise such as are not to be found elsewhere, and that they would be particularly trying to a system which had not evolved with and out of them. The report of the commission[1] appointed to survey the educational conditions in the islands serves to state with remarkable clearness the nature of these

[1] "A Survey of Education in Hawaii," *Bureau of Education Bulletin No. 16, 1920.* Washington: Department of the Interior. Pp. 408.

problems together with recommendations and suggestions as to means to be employed and methods to be used in overcoming them.

Necessarily the survey differs from those made, for example, of a city or state in which quantitative data serve as bases of comparisons. Hawaii presents a problem peculiar to herself; comparisons become almost impossible. It is the highly particularized nature of the problems which makes the survey interesting reading. One obtains some idea as to the test to which the system has been put, as well as the magnitude of the task ahead.

In the character of the population is found one of the major causes of the difficulties reported. People of Asiatic orgin make up over 60 per cent of the total, and of these the Japanese are largely dominant. Only about 12 per cent of the total are of Caucasian blood. Latin races are represented, as are also the natives, along with immigrants from others of the Pacific islands. Crosses between these blood lines are frequent, although, for the most part, there is a strong tendency toward the maintenance of racial purity. This is particularly true of the Japanese. And it is this tendency to retain racial attachments which is at the basis of many of the difficulties. Here again, the Japanese present the most knotty problem. They are increasing at so rapid a rate that it is expected that by 1940 they will have become a determining factor in the political history of the islands. They desire to retain their own language and religion, and to this end have developed their own schools, operating outside of the public schools, and serving to transmit not only the language and religion of the parent-country, but also its customs and traditions. These schools operate for an hour or an hour and a half before and after the opening and closing of the public schools, thus placing upon the attendants an extraordinary burden. The excellent moral standards developed are acknowledged. Japanese teachers are brought in to conduct the schools and, naturally, serve only to strengthen the ties to the fatherland. These foreign-language schools present one of the big problems. How shall American traditions and American allegiance be developed in these future citizens when the forces operating to develop it are thwarted at every turn?

Further difficulties are found in the fact that the amount of supervision given to both elementary and high schools is quite inadequate. As on the mainland, for the past few years it has been difficult to obtain teachers enough to keep the schools open, and, as a result, standards of qualification have fallen lamentably low. Generally, the elementary teachers are not well qualified, and more adequate organization for the purpose of supplying proper supervision is an outstanding need. The qualifications of teachers in the high school compare favorably with those of similar schools in most of the states. But the surveyors emphasize the need for revisions of the courses of study in order to fit them to meet the needs of the island population. There is need for a rejuvenated normal school, for junior high schools, for more accessible senior high schools, and for a university in closer contact with the people on the one

hand and with the secondary schools on the other. As everywhere, there is need for more money.

Then, too, there are over fifty private schools in operation, the greater part of which are denominational in origin and backing. These are recognized as a valuable educational asset since they are serving almost six thousand children. But they need supervision; they need better teaching facilities and better teachers; they need better courses of study.

There are many things to be commended. The surveyors admit the fact, but proceed upon the assumption that their task lay mainly in the effort to point out weaknesses and recommend changes. One feels, after reading the report, that both things have been done. Certainly the schools of Hawaii have a tremendously big, but an equally interesting, job. The survey should serve to bring into prominence the nature of the problems, while the recommendations point the way to the solution of many of them. Another survey ten years hence will be interesting by way of comparison.

Study exercises for English.—The supervised-study movement has received a great deal of general emphasis for a number of years. The value of the idea is greatly enhanced, however, by its particular applications to a single subject. The second volume[1] of the Macmillan "Supervised Study Series" is an excellent example of the service rendered by such specific treatment.

The purpose of the book is well expressed in a paragraph from the Preface:

> This book is intended to illustrate a technic for the treatment of the English lesson in junior high schools where the lengthened period of sixty, seventy, or eighty minutes prevails. It is a sane conclusion that the work of the school should be confined to school hours. To use the evening hours of children for the preparation of lessons is to overemphasize the importance of "schooling" and to discount those equally educative influences which come from the social contacts of home, church, and community. Enriched courses of study demand the longer school day, but a due regard for the normal development of children demands that time allotments within the longer day shall be so carefully made, and efficient methods of study so commonly practiced, that the day's work can be effectively accomplished within the school [p. vii].

The author has been successful in producing a book which is highly serviceable to the classroom teacher. The specific and detailed manner in which the topics of oral English, literature, and composition are treated and the excellent plans which are provided will indeed prove stimulating to the upper-grade classes. Also the use of minimum, average, and maximum assignments for making provision for individual differences is worthy of special study. The book deserves, and will doubtless receive, wide reading.

Training for librarianship.—In 1918 the public libraries of the United States circulated over 200,000,000 books for home reading. The educational

[1] A. LAURA MCGREGOR, *Supervised Study in English.* New York: Macmillan Co., 1921. Pp. xii+220.

influence of this service is beyond measure. The public is desirous of a continuation and an extension of this service, but such a development is at present seriously held in check by the lack of technically trained library workers. One large city recently reported two hundred vacancies on its staff. In a recent book[1] Mr. Friedel has described the opportunities for library development, the characteristics of different types of libraries, and the general requirements for such service, in a manner which gives definite vocational intelligence to the young person planning a life career.

The book opens with a discussion of librarianship as a profession, and a discussion of the technical, administrative, and social work of the public library. Following this are a number of chapters describing the organization and service of special libraries as they now exist in the fields of business, finance, law, medicine, and technology. The latter part of the book is devoted more particularly to professional training required for library work, describing typical courses of study and listing the requirements of schools offering such training.

The book will interest the general reader because of the view which it gives of the internal operations of a library which are not visible to the ordinary patron. As a supplementary reader for courses in vocational guidance it will be of particular value. It also contains many suggestions for library service which would be stimulating to those in charge of school libraries in both city and rural districts.

American Library Association publications.—Two pamphlets which have just been issued by the American Library Association will be of general interest and service to school libraries. The first of these is a general bibliography[2] of the best 1920 books, including general literature, fiction, children's books, and technical books. The bulletin gives a brief descriptive note about each book, together with full information as to publisher, price, and library classification number. The books were chosen with regard to their desirability for the small or medium-sized library. Librarians and teachers who wish to keep up with the new books will find this a valuable bulletin.

A second manual,[3] relating to the care of books, gives information which will reduce the expense and increase the service of libraries which follow its directions. Schools would also realize a considerable saving by applying the same system of book repair to the regular supply of texts. Large school systems realize the economy of book conservation and handle it through a

[1] J. H. FRIEDEL, *Training for Librarianship*. Philadelphia: J. B. Lippincott Co., 1921. Pp. 224. $1.75.

[2] *The Booklist Books, 1920*. Chicago: American Library Association, 1921. Pp. 72. $0.35.

[3] MARGARET BROWN and GERTRUDE STILES, *Mending and Repairing of Books*. Chicago: American Library Association, 1921. Pp. 23. $0.25.

regular routine. Most small schools have no system of book repair and suffer loss accordingly. The manual discusses such questions as when to bind and when to mend, supplies needed, ways to mend, ways to clean, temporary bindings, etc.

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